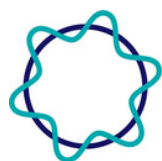




Academic Data Science Alliance

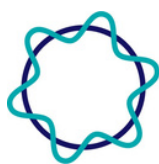
**Member Book
2022-2023**



**Academic
Data Science
Alliance**

March 2023

ADSA Member Book 2022-2023



**Academic
Data Science
Alliance**

2022-2023 ADSA Member Book

The Academic Data Science Alliance is a community of data science leaders, practitioners, and educators who take responsibility for a just, equitable future where data science approaches are thoughtfully applied in all domains for the benefit of all.

The ADSA Member Book highlights the institutions that: have provided funds for ADSA through membership dues; support ADSA as a leading organization for academic data science; and agree with the guiding principles in ADSA's Mission, Vision, and Values. ADSA member institutions represent a range of models, maturity levels, and audiences at academic institutions in the US and beyond. We offer memberships for institutions, research labs/small research institutes, and individuals. The Member Book showcases our members and provides a resource for students, administrators, and leaders of data science programs.

ADSA is generously supported by the following organizations:



**ALFRED P. SLOAN
FOUNDATION**



Cite as:

Academic Data Science Alliance (2023). Academic Data Science Alliance: Member Book 2022-2023. 10.5281/zenodo.7948043

2022-2023 ADSA Member Book

Table of Contents

Institution Members

- American Statistical Association
- American University of Paris
 - Data Science @ AUP
- Boston University
 - Faculty of Computing & Data Sciences
- Columbia University
 - Data Science Institute
- Florida A&M University
- Georgia Institute of Technology
 - Institute for Data Engineering and Science (IDEaS)
- Howard University
 - Center for Applied Data Science and Analytics
- International Computer Science Institute (ICSI)
- James Madison University
- Middle Tennessee State University
- Mississippi State University
- New Jersey Institute of Technology
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- New York University
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- North Carolina State University
 - Data Science Academy
- Northwestern University
 - Northwestern Institute on Complex Systems (NICO)

2022-2023 ADSA Member Book

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Institution Members

- The Ohio State University
 - Translational Data Analytics Institute
- Pennsylvania State University
 - Institute for Computational and Data Sciences
- Texas A&M University
 - Institute of Data Science
- Tufts University
 - Data Intensive Studies Center
- University of Amsterdam
 - Data Science Centre
- University of Arizona
 - Data Science Institute
- University of California, Berkeley
 - Berkeley Institute for Data Science (BIDS)
- University of California, Irvine
 - Donald Bren School of Information and Computer Sciences
- University of California, San Diego
 - Halicioğlu Data Science Institute
- University of Chicago
 - Center for Translational Data Science
- University of Delaware
 - Data Science Institute

2022-2023 ADSA Member Book

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Institution Members

- University of Illinois, Urbana-Champaign
 - National Center for Supercomputing Applications (NCSA)
- University of Maryland, Baltimore County
- University of Massachusetts, Amherst
 - Center for Data Science
- University of Michigan
 - Michigan Institute for Data Science (MIDAS)
- University of North Carolina, Chapel Hill
 - School of Data Science and Society
 - Renaissance Computing Institute (RENCI)
- University of North Carolina, Charlotte
 - School of Data Science
- University of Oklahoma
 - Data Institute for Societal Challenges (DISC)
- University of Pennsylvania
 - Data Driven Discovery Initiative (DDDI)
- University of Rochester
 - Goergen Institute for Data Science (GIDS)
- University of Southern California
 - Viterbi School of Engineering
- University of Texas, El Paso
 - Department of Mathematical Sciences

2022-2023 ADSA Member Book

Table of Contents (continued)

Institution Members

- University of Texas, San Antonio
 - School of Data Science
- University of Toronto
 - Data Sciences Institute
- University of Utah
 - One Utah Data Science Hub
- University of Virginia
 - School of Data Science
- University of Washington
 - eScience Institute
- University of Wisconsin - Madison
 - data science @ uw
- University of Wisconsin - Milwaukee
- Vanderbilt University
 - Data Science Institute
- Virginia Commonwealth University
- Wake Technical Community College
 - Data Science and Programming Support Services
- William & Mary
 - Data Science Program
- Winston-Salem State University
 - Center for Applied Data Science

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Research Lab/Small Research Institute Members

- Brown University
 - Data Science Institute
- Colgate University
 - The Data Science Collaboratory
- Harvard University
 - Harvard Data Science Initiative
- Lehigh University
 - Institute for Data, Intelligent Systems, and Computation (I-DISC)
- University of California, Santa Barbara
 - Bren School of Environmental Science & Management
- Washington State University

Other Members

- Carnegie Mellon University
- Saint Petersburg College
- Institutional affiliations of individual ADSA members



American Statistical Association

SUMMARY

The American Statistical Association is the world's largest community of statisticians and data scientists.

It is the second-oldest continuously operating professional association in the country.

Since it was founded in Boston in 1839, the ASA has supported excellence in the development, application, and dissemination of statistical science through meetings, publications, membership services, education, accreditation, and advocacy.

ORGANIZATIONAL STRUCTURE

Professional association

LOCATION

American Statistical Association
732 North Washington Street
Alexandria, VA 22314-1943

PROGRAM OVERVIEW

ASA is a professional society. It does not grant degrees; rather, it supports departments, programs and individual professionals through journals, meetings, professional development, networking and advocacy.

ASA champions the data science community in a variety of ways beyond its membership in ADSA. For instance, ASA is a member of CSAB, which as part of ABET accredits undergraduate programs in data science. ASA provides input into the accreditation criteria and ASA members are trained to serve as program evaluators.



ASA has sections which provide members with the opportunity to network, research, and develop as professionals with others who are interested in the same topic. Our largest section is Statistics Learning and Data Science. Our Statistics and Data Science Education section is also large and active.

ASA publishes or co-publishes 16 leading journals in statistics and data science, among which are Statistical Analysis and Data Mining, the Journal of Computational and Graphical Statistics, and the Journal of Statistics and Data Science Education.

CONFERENCES, MEETINGS AND WORKSHOPS

ASA's professional meetings are highly regarded. The flagship meeting for the statistics profession is the Joint Statistical Meetings, held in late July or early August. The ASA manages this meeting, which includes representation from 10 other statistical and data science organizations. The Symposium on Data Science and Statistics (held in May) and the Women in Statistics and Data Science Conference (October) are among our other high-quality meetings.

ASA promotes data science and statistics in the statistical agencies of the federal government and in state and local government as well through advocacy and through our "Count on Statistics" platform.



SOCIAL

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twitter: @AmstatNews

linkedin: American Statistical Association - ASA

facebook: @AmstatNews

instagram: @AmstatNews

pinterest: pinterest.com/amstatnews

EDUCATION AND OUTREACH

ASA supports students through competitions and outreach. ASA DataFest is an annual 48-hour competition in which teams of undergraduate students work to reveal insights into a rich and complex data set. ASA hosts data challenges in the fall and spring through our "This is Statistics" program, which is our outreach to high school and undergraduate students.

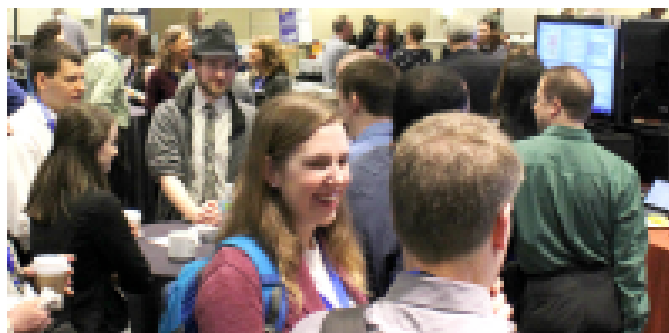
ASA also supports K-12 and college instruction by providing guidelines for teaching at various levels, resources for teaching, and networking for instructors.



PROFESSIONAL DEVELOPMENT

ASA provides professional development through in-person and online instruction in a wide variety of topics. Professional development coursework spans everything from basic overviews to advanced instruction in cutting-edge topics and includes courses in non-technical skills as well.

The board and staff leadership of the ASA welcomes suggestions for additional ways to support and advocate for the data science community.



SUMMARY

Chartered as a liberal arts college in 1962, AUP is today an urban, independent, international university. Data science at AUP spans topics such as machine learning, artificial intelligence, algorithms, statistics and geographical information systems. Teaching and research cover a wide variety of application fields such as law, finance, astrophysics, and literature.

ORGANIZATIONAL STRUCTURE

Data Science at AUP spans across several disciplines and departments, including Computer Science, Mathematics, Environmental Science, and Politics, with contributions from faculty in departments across the university

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- MSc in Human Rights and Data Science
- Undergraduate minor in Data Science

PROGRAM STATISTICS

- Number of faculty: 5
- Affiliated faculty: 36

LOCATION

5, Boulevard de La Tour-Maubourg
75007 Paris, France

DATA SCIENCE AT AUP

AUP offers a Master's program in Human Rights and Data Science and an undergraduate minor in Data Science. Students may also engage with projects applying data science to a topic of their choice, join the data science club, or take interdisciplinary courses like Environmental Data Science. Internships have covered a variety of subjects, including data analysis for education in emergency, data protection, support of immigrants learning data management skills, and many more. Undergraduates at AUP may also take a data science introductory course to satisfy components of our Global Liberal Arts Core Curriculum.



MINOR IN DATA SCIENCE

Data science can be applied to all fields of human endeavors – such as understanding environmental data or clinical trial data, building economic models, undertaking psychological studies or political and marketing analyses, or simply making sense of the huge swathes of data generated by our social media. However, biases and errors in data interpretation can result in unexpected and undesirable effects on particular groups. AUP's Minor in Data Science gives students the opportunity to learn about this burgeoning area, taking a critical approach. Students in the minor learn how to apply the data science process to their field of interest, discovering along the way the Python and R programming languages, the essential notions of statistics and probability that underlie data science, and the ethical concerns surrounding the application of data science.

MASTER IN HUMAN RIGHTS AND DATA SCIENCE (HRDS)

The MSc in Human Rights and Data Science at AUP prepares students to confront ethical questions at the forefront of emerging high-tech industries such as data protection and ethical AI, exploring how technological development may complement human rights protections rather than impinge upon them. The HRDS program combines a rigorous foundation in data science techniques with the legal and philosophical considerations necessary to ensure the ethical implementation of a data science project and the policies regulating it. The program concerns itself as much with the use of data-centered software as it does with its development, and with the human and social costs of emerging digital technologies as much as with the benefits.

THE HRDS CURRICULUM

The curriculum includes classic courses in both data science and human rights law, as well as a series of innovative workshops, designed in collaboration with our partner institutions, giving students the opportunity to build a strong professional network and apply their knowledge on practical cases. Past workshops and information sessions have been run by lead data scientists, chief privacy counsels and data protection officers of large organizations, including the French Development Agency, MasterCard, IBM, International Committee of the Red Cross, OECD Health Statistics, and the French Data Protection Authority, among others. In addition to their academic diploma, students are guided through the preparation of a certification exam in data protection.

Thanks to their deep understanding of the fast-changing landscape of data-related technology and regulations, and by embracing both the intellectual and vocational nature of human rights law and data science, AUP's HRDS graduates will help alleviate the considerable shortage of experts in ethical AI confronting government and industry.

STUDENTS WORK AT INTERDISCIPLINARY PROJECTS THAT HAVE REAL IMPACT

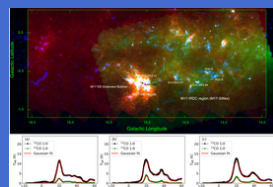
DISTANT READING PROJECT

Development of Jupyter notebooks introducing Comparative Literature students to new counter-intuitive forms of literary analysis.



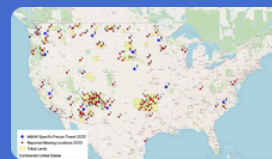
ML APPLICATIONS IN ASTROPHYSICS

Using data from ALMA, the largest telescope on the planet, to develop ML algorithms to detect spectral lines in multidimensional spectroscopic data-set.



MISSING AND MURDERED INDIGENOUS WOMEN (MMIW)

The project addresses the dearth of data and studies related to MMIW cases. Multiple sources of collection, analysis, localization, etc.



DEMOCRACY IN THE DIGITAL AGE

Re-framing Tocqueville's society of individuals for analysis in the digital age. Are technologies potentially disruptive to traditional democratic structures?



Student projects have been presented to conferences such as the International Conference on Digital Society Now, Belgrade 2022 and Challenging Borders Conference, Albion College, 2023.



Faculty of Computing & Data Sciences

BOSTON UNIVERSITY

SUMMARY

Founded in 2019, the Faculty of Computing & Data Sciences (CDS) is a transdisciplinary, degree-granting academic unit that augments existing programs under the traditional university organizational structure. We are committed to propelling data sciences into the future and are actively recruiting faculty, admitting students, and creating impactful and sustainable learning experiences.

ORGANIZATIONAL STRUCTURE

The Faculty of Computing & Data Sciences is a degree-granting academic unit embedded in the provost office

PROGRAM STATISTICS

- Number of CDS faculty: 11 core; 36 secondary
- Number of CDS staff: 12
- Number of affiliated faculty: 350+ Hariri Institute affiliates
- 56 undergraduate courses
- 950 undergraduates enrolled

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- PhD in Computing & Data Sciences
- MS in Data Science, Fall 2023
- BS in Data Science
- Undergraduate Minor in Data Science
- All programs feature methodological and in-the-field tracks

LOCATION

665 Commonwealth Ave.
Boston, MA 02215

PROGRAM OVERVIEW

Boston University (BU) is one of the largest private institutions in the US with 34,000+ students, 10,000+ faculty and staff, spread across 17 schools and colleges covering everything from fine arts to medicine. The mission of CDS is to be an integrative cross-cutting academic unit, facilitating the movement of ideas, research, and educational programs across the University and building bridges between established departments, schools, and colleges.

THE BU CDS VISION, MISSION & VALUES

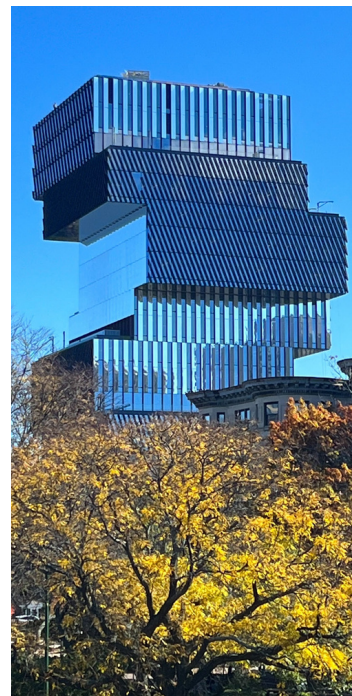
Our **vision** (our north star) is to improve the human condition by bringing computational and data-driven technologies, systems, and processes to bear on the greatest challenges facing our world.

Our **mission** (what we do) is to conduct cutting-edge research that matters to society, to provide students with a rigorous education and vibrant academic experiences that unleash their innovative capacities, and to democratize access by learners, researchers, practitioners, and the public to the transformative power of computation and data.

Our **values** (how we do it) lead us to reward creativity and excellence, recognize collaborative endeavors, respect and trust each other, celebrate our diversity of perspectives and lived experiences, and uphold our moral and ethical responsibilities to the fullest.

DYNAMIC DATA SCIENCE HOME

Our new home, located in the center of BU's campus, provides exceptional workspace and unmatched teaching and learning environments. The 19-story structure, which is shared with the Computer Science and Math & Stats departments, and the Hariri Institute for Computing, features a convention-bending design inside and out – making it an iconic presence on our Central Campus. That design is state-of-the-art in every way: striking architecture, inspiring classrooms and collaboration spaces, advanced resources, and open, flexible interior spaces. And, most impressive is the building's unmatched sustainability profile, featuring zero-carbon heating and cooling provided by thirty-one 1,500-foot geothermal wells, making it the largest such building in the Northeast.





SOCIAL

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linkedin: Faculty of Computing & Data Sciences at Boston University

facebook: [@BUCDS](https://www.facebook.com/BUCDS)

instagram: [@bu_cds](https://www.instagram.com/bu_cds)



A DISTINCT ORGANIZATION

We are the home for data science at BU, a deeply inclusive, collaborative and cooperative place with porous boundaries. A hub for data science, CDS is the convener and amplifier of university-wide interdisciplinary research centers, including the Rafik B. Hariri Institute for Computing — an incubator that accelerates data-driven research in various disciplines by leveraging BU's strengths in existing centers and new initiatives focused on data science, artificial intelligence, software engineering, computational science, cloud computing, digital health, data privacy, cybersecurity, and the nexus of computing, society, and law.

COMMUNITY & CONNECTION

The CDS community is comprised of both faculty from cognate units and tenured and tenure-track faculty appointed through CDS with shared interests in the many aspects of data science. As such, CDS is a self-governing autonomous academic unit and not merely a division or institute that acts as an administrative overlay to coordinate the priorities of other academic units.



HUBS FOR IMPACT

Rather than clustering faculty, students, and programs around computing and data subspecialties (e.g., machine learning, data mining, cloud computing), CDS centers around thematic areas of impact, currently Equity, Sustainability, Health, and Civic Tech. Much of our work is done through co-Labs that involve faculty, students, and external partnerships around applied research, curricular, and co-curricular collaborations. The experiential learning component of these collaborations is delivered through the BU Spark! program leveraging a shared infrastructure and staff support.

SUMMARY

DSI advances the state-of-the-art in data science, transforms all fields, professions, and sectors through the application of data science, and ensures the responsible use of data to benefit society. We train data scientists, develop innovative technology, foster collaborations, and work with industry to bring promising ideas to market.

ORGANIZATIONAL STRUCTURE

DSI is a collaborative institute of working groups and research centers across Columbia University, offering programs and training with faculty from a wide range of disciplines

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- M.S. in Data Science
- Ph.D. with a specialization in Data Science
- Certification of Professional Achievement in Data Sciences
- Specialization in Executive Education

PROGRAM STATISTICS

- Number of core staff:
 - 6 Research Scientists and Scholars
 - 12 Postdoctoral Researchers
- Number of affiliated members: 370+
- Number of students: 483 Current Graduate Students (Fall 2023)

LOCATION

Northwest Corner Building
550 West 120th Street Suite 1401
New York, N.Y. 10027

PROGRAM OVERVIEW

Drawing on Columbia's strengths in computer science, statistics, and industrial engineering and operations research, DSI was launched in 2012 to unite our expertise and a university-wide interest in this revolutionary approach. The university is a trailblazer in the field and is uniquely poised to expand data science to every corner of the institution.

We use the tagline "Data for Good" to capture succinctly the who, what, when, why, and how of data science at Columbia. We aim to have a positive impact on society by tackling societal grand challenges, such as climate change, health care, and social justice. Tackling such challenges cannot be done by one discipline alone, and given the kinds and amounts of data amassed in these sectors, data science will be at the heart of addressing these challenges.

DEGREE, CERTIFICATE, AND SPECIALIZATION DETAILS

M.S. in Data Science - This program is jointly offered in collaboration with the Graduate School of Arts and Sciences' Department of Statistics, and The Fu Foundation School of Engineering and Applied Science's Department of Computer Science and Department of Industrial Engineering and Operations Research.

Ph.D. with a specialization in Data Science - The Ph.D. specialization in data science is an option within the Applied Mathematics, Computer Science, Electrical Engineering, Industrial Engineering and Operations Research, and Statistics departments.

Certification of Professional Achievement in Data Sciences - This program is jointly offered in collaboration with the Graduate School of Arts and Sciences and The Fu Foundation School of Engineering and Applied Sciences. Join us from anywhere in the world as the program is now also offered online.

Executive Education - We partner with the Center for Technology Management to provide industry leaders with a better understanding of how to design and manage data science applications in their organizations.



SOCIAL

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linkedin: The Data Science Institute at Columbia University

facebook: @DataSciColumbia

instagram: @DataSciColumbia

KEY INSTITUTE INITIATIVES

- The DSI Seed Funds Program supports research collaborations between data scientists and domain experts.
- The DSI Postdoctoral Fellows Program supports next-generation leaders whose research will advance or apply data science.
- The Northeast Big Data Innovation Hub addresses societal and scientific challenges using data science approaches, spurs economic development, and accelerates innovation in the national big data ecosystem.
- The Columbia-IBM Center Seed Funds Program, which is a partnership with the School of Engineering and Applied Sciences, supports new research and education projects as part of the Columbia-IBM Center on Blockchain and Data Transparency.
- The DSI Scholars Program provides undergraduate and graduate students with research opportunities. A branch of the program, Data for Good Scholars, connects undergraduate students to projects hosted by nonprofits, community organizations, and government agencies.
- M.S. in Data Science Capstone Projects connect faculty with graduate students to work on cutting-edge data science research projects.
- The DSI Faculty Recruitment Program supports faculty hires in any field with an interest in data science.
- The DSI Campus Connections initiative provides expertise in data science to the Columbia community.
- The DSI Industry Affiliates Program facilitates interactions between companies and Columbia faculty and students.
- DSI produces data science bootcamps for Columbia's Obama Foundation Scholars through a collaboration with Columbia World Projects.
- DSI works with Columbia Technology Ventures and Columbia Entrepreneurship to support students and faculty with an interest in data science startups while attracting venture capital investors.
- The Collaboratory, co-founded by Columbia Entrepreneurship and SI, supports the development of innovative, interdisciplinary curricula to embed data or computational science into traditional domains, and embed business, policy, cultural, and ethical topics into data and computer science.
- The Race + Data Science Lecture Series spotlights research at the intersection of race and data. The Data for Good Seminar Series hosts speakers on ethical and societal concerns around data. The DSI Seminar Series welcomes speakers on the foundations and applications of data science.
- DSI's flagship annual event, Data Science Day, showcases research through lightning talks, live demonstrations, and posters. Keynote speakers have included Alfred Spector (Two Sigma), Diane Greene (Google Cloud), Brad Smith (Microsoft), Eric Schmidt (Google), and Pat Bajari (Amazon).

WHAT PEOPLE ARE SAYING ABOUT DSI

"Our Data Science Institute is indispensable to virtually every scholarly initiative at the University dedicated to addressing a societal problem." - Lee C. Bollinger, Columbia University President

"I love how students are encouraged to branch out across departments and engage in projects with faculty and other students across the university." - Kailande Cassamajor, Class of 2023, B.S., Biology and Psychology, Howard University

"I found it to be a well-rounded program—not just technical, but also applied. I appreciate how students are given the opportunity to use cutting edge tools on real problems." - Alberto Munguia Cisneros, Class of 2021, VP, Risk Management @ Morgan Stanley

"I ended up picking Columbia for the rigorous academic curriculum and the fact that the New York City area is a prominent tech hub." - Carlo Provinciali, Class of 2020, Data Scientist @ Latch



Academic
Data Science
Alliance

Oct. 24-27, 2023
in San Antonio, TX

ADSA ANNUAL MEETING



Future Leaders for Responsible Data Science

The ADSA Annual Meeting convenes data science methodologists and domain researchers from all disciplines and career stages to share breakthroughs and state-of-the-art approaches in data science research and education, with a strong emphasis on responsible data science.



We encourage new, untested ideas to promote brainstorming for innovation, collaborative feedback, and engaging discussions. One focus of this meeting is building new collaborations, which we facilitate through networking and sessions that focus on data types.

Each year, we leverage local strengths to focus the meeting on specific domains. This year, we are highlighting the strong presence of **biosciences, healthcare and the arts** in San Antonio for a special theme:

Health, Well-being, & the Arts

A huge Thank You to our 2023 sponsors:



There's still time to sponsor the 2023 meeting!
Contact us at info@AcademicDataScience.org

Learn More:

tinyurl.com/2023-ADSA-annual-meeting

FLORIDA **A&M** UNIVERSITY

SUMMARY

The interdisciplinary Data Science and Engineering Program directed by Associate Dean Dr. Pierre Ngnepieba Dean's office, has program coordinators in Computer and Information Science, Mathematics, and Biology. An MS and BS in Data Science are planned for Fall 2023. Current research is in Cancer, Neuro-degenerative diseases, and viral diseases.

ORGANIZATIONAL STRUCTURE

Interdisciplinary Program within the Dean's office

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- BS in Data Science
- MS in Data Science

PROGRAM STATISTICS

- Number of core faculty: 4
- Number of professional staff: 2
- Affiliated members: 5

SOCIAL

web: www.famu.edu

LOCATION

Florida A & M University
College of Science and Technology
103 Commons Building
1610 Martin Luther King Jr. Blvd.
Tallahassee, Florida

PROGRAM OVERVIEW

The interdisciplinary Data Science and Engineering Program at Florida A&M University is housed in the College of Science and Technology's Dean's Office under the direction of the Program Director, Associate Dean Dr. Pierre Ngnepieba. Dr. Ngnepieba works with Program Coordinators in the Departments of Computer and Information Science, Mathematics, and Biology, where domain concentrations currently exist.

Other FAMU disciplines can be incorporated as domains in the student's degree plan with assistance from their assigned advisors in collaboration with the Program Director. An MS and BS in Data Science are planned for fall 2023. Current research is in Cancer, Cybersecurity, Public Policy, Forensics in Digital Science, Finance, neuro-degenerative, and viral diseases





Georgia Tech

Institute for Data Engineering and Science

SUMMARY

The Institute for Data Engineering and Science supports research in data science foundations and data-driven discovery. Foundational areas of focus include machine learning, artificial intelligence, high-performance computing, algorithms, statistics, and optimization. The institute supports data-driven research in many areas including astrophysics, chemistry, biology, medicine, materials science, energy, and smart cities.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

PROGRAM STATISTICS

- Number of Faculty: 50
- Number of Staff: 12
- Affiliated Faculty: 200
- Number of Students:
 - M.S. Analytics:
 - 154 on campus
 - 5,239 online
 - Ph.D. Machine Learning: 123

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- M.S. in Analytics
- M.S. in Analytics - Online
- Ph.D. in Machine Learning
- Minor in Computational Data Analysis
- Minor in Computing and Intelligence
- B.S. in Industrial Engineering - Analytics and Data Science

LOCATION

CODA Building, 12th Floor
756 W Peachtree St NW
Atlanta, GA 30308

PROGRAM OVERVIEW

The Institute for Data Engineering and Science (IDEaS) is one of Georgia Tech's ten Interdisciplinary Research Institutes, providing the thought leadership, expertise, and coordination for strengthening big data research across campus. The institute faculty and its activities span all colleges and disciplines at Georgia Tech. Constituent and affiliated centers of the institute include the center for High Performance Computing (CHiPC), the center for Research in Novel Computing Hierarchies (CRNCH), the center for Machine Learning (ML), Algorithms and Randomness Center (ARC), the industry-funded center on Machine Learning for Seismic Industry (ML4Seismic), and the industry-funded center for cloud computing (CloudHub). IDEaS also operates major NSF-funded centers including the NSF South Big Data Regional Innovation Hub (SouthBDHub), the NSF Transdisciplinary Institute for Advancing Data Science (TRIAD), and the NSF AI Institute for Adult Learning and Online Education (ALOE).

Academic programs related to data science at Georgia Tech are managed by academic units and interdisciplinary programs. Chief among them relevant to data science include the Ph.D. degree programs in Machine Learning (ML) and Computational Science and Engineering (CSE); the M.S. degree programs in Analytics (on-campus and online); Urban Analytics; and Computational Science and Engineering (CSE). Tech also offers undergraduate minors and specializations in Computational Data Analysis (CS), Computing and Intelligence (CS), and Analytics and Data Science (ISyE).



IDEaS operates the NSF South Big Data Regional Innovation Hub in collaboration with the Renaissance Computing Institute (RENCI). The Hub serves the Southern U.S. census region (16 Southern states from Delaware to Texas, Washington DC, Puerto Rico, the U.S. Virgin Islands, and territories) and nurtures multi-stakeholder big data partnerships to find data-driven solutions to regional, national, and societal challenges. Areas of particular focus include health disparities, environment, materials and manufacturing, smart cities and communities, team science, data sharing and cyberinfrastructure, and data science education and workforce development. The Hub has an extensive network of more than 1300 members from universities, government labs, corporations, and foundations.

For more information, please visit southbigdatahub.org



SOCIAL

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twitter: @IDEaSatGT

linkedin: Georgia Tech Research

MACHINE LEARNING PH.D. PROGRAM

The machine learning (ML) Ph.D. program is a collaborative venture between Georgia Tech's colleges of Computing, Engineering, and Sciences. The curricular requirements include four core and five elective courses, a qualifying exam, and a doctoral dissertation defense. Students are admitted through one of eight participating home units. More information can be found at ml.gatech.edu/phd.

ANALYTICS M.S. PROGRAM

The Master of Science in Analytics is an interdisciplinary analytics and data science program that leverages the strengths of Georgia Tech in statistics, operations research, computing, and business by combining the world-class expertise of the Scheller College of Business, the College of Computing, and the College of Engineering. By blending the strengths of these nationally ranked programs, graduates will learn to integrate skills in a unique and interdisciplinary way that yields deep insights into analytics problems. Students can join the program on-campus or through the online offering. More information can be found at analytics.gatech.edu.

COMPUTATIONAL SCIENCE AND ENGINEERING M.S. AND PH.D. PROGRAMS

The Computational Science and Engineering (CSE) M.S. and Ph.D. programs are interdisciplinary programs offered by the College of Computing, the College of Engineering, and the College of Sciences. These graduate programs emphasize the integration and application of principles from mathematics, science, engineering and computing to create computational and data-driven models for solving important real-world problems. Students will be required to obtain a breadth of knowledge across a set of core areas, depth of knowledge in a specific computational specialization, and knowledge to apply computational and data-driven techniques in a domain of application. For the Ph.D. program, students will be expected to create significant computational artifacts (e.g., software), and complete independent research that advances the state-of-the-art. More information can be found at cse.gatech.edu/academics.

URBAN ANALYTICS M.S. PROGRAM

The M.S. in Urban Analytics (MSUA) program is a joint venture between the School of City and Regional Planning, the School of Industrial and Systems Engineering, the School of Computational Science and Engineering, and the School of Interactive Computing. MSUA is a one-year program (three semesters), designed to give graduates a core of computing, urban planning, and data analysis and visualization skills to identify, analyze, and solve urban problems. Students will integrate those skills in an interdisciplinary way that other, single-discipline-oriented urban analytics degrees might not, and will experience a depth of urban problems addressable with data analytics. More information can be found at planning.gatech.edu/master-science-urban-analytics.



May 8-10, 2023 in Boston, MA

DATA SCIENCE LEADERSHIP SUMMIT

The DSL convenes leadership and faculty of current and nascent data science programs to share best practices where they face similar challenges and opportunities; and to take collective responsibility in preparing next-generation data scientists to contribute in the best interests of society.



Keynote Speaker

Afua Bruce is an adjunct professor at Carnegie Mellon University, an affiliate at Harvard Kennedy School's Berkman Klein Center, Principal of the ANB Advisory Group LLC, and author of the book, "**The Tech That Comes Next: How Changemakers, Technologists, and Philanthropists Can Build an Equitable World**".



Learn More:

tinyurl.com/2023-Leadership-Summit



HOWARD
UNIVERSITY

Center for Applied Data Science and Analytics

SUMMARY

The Center of Applied Data Science and Analytics (CADSA) coordinates and facilitates interdisciplinary programs in data science, collaborates with other institutes and centers internal and external to Howard University, and expands research and educational linkages that will include internship and placement programs with sponsoring corporations and government agencies.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

PROGRAM STATISTICS

- Number of affiliated members: 13

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- M.S. Applied Data Science and Analytics
- Specializations in:
 - Social Justice
 - Environmental Justice
 - Economic Empowerment
 - Minority Health & Health Disparities

SOCIAL

email: datascience@howard.edu

web: datascience.howard.edu

LOCATION

2400 Sixth Street NW
Washington, DC

PROGRAM OVERVIEW

CADSA provides the HU investigator community with the resources needed to develop data-driven insights into research trend directions and how the HU research effort can position itself to both benefit from and influence the developing trend directions. In summary, the CADSA is an HU institutional tool of inquiry that produces new information that can then be used to address important human problems. As a result, the research philosophy of the CADSA will be to inquire, inform, and intervene. CADSA will implement this three-fold research philosophy as described below.

INQUIRE

The process of inquiry will involve the probing analysis of new and/or existing data to generate new information. The ultimate outcome of the inquiry will be the conversion of data into useful information; the 'inquire' process will be driven by posing pertinent research questions that will provide meaning and understanding to available data from existing sources or emanating from the pursuit of original research.

INFORM

Data that is understood or appreciated in the proper context is viewed as information. Communication with peers, funders, and the public is an important aspect of competitive research, especially research that is focused on problem resolution. The research arm of CADSA will be very active in communicating new information to all relevant stakeholder communities. This is critical to ensure discipline-based and community-based consensus regarding newly generated information and its potential use or applicability for problem resolution.

INTERVENE

Knowledge may be viewed as categorized or organized information. As a result, when new information is considered in the context of relevant categorized/organized existing information, it contributes to the expansion of the knowledge pool and problem-solving potential of the information collective. Problem-solving occurs when relevant knowledge is applied to address a current applicable problem. For problem-solving to occur, knowledge intervention into the current status of problems must occur.





International Computer Science Institute

SUMMARY

ICSI is an independent non-profit research institute and an affiliate of the UC Berkeley. With a focus on scientific excellence and social impact, our work transcends disciplinary boundaries and brings academia, government, industry, and non-profit organizations together to inspire breakthroughs.

ORGANIZATIONAL STRUCTURE

Non-profit research institute

PROGRAM STATISTICS

- Affiliated faculty: 9
- Research staff: 26
- Affiliated researchers: 32
- Graduate students: 22

RESEARCH AREAS

- AI, Machine Learning, Big data
- Biotechnology
- Sky and Cloud computing
- Computer vision
- Cybersecurity
- Digital Twins
- Geospatial and Remote Sensing
- Privacy & Security
- Speech & Language analysis
- Systems & networking

LOCATION

2150 Shattuck Ave, Suite 250,
Berkeley, California 94704

WORLD-CLASS RESEARCH WITH REAL-WORLD IMPACT

ICSI is a place where researchers solve hard problems and change the world. Since 1988, we have pioneered interdisciplinary research across all areas of computer science and data science to generate fundamental insights, address societal challenges, and catalyze entrepreneurial opportunity.

Our researchers are leaders in their fields. Current ICSI affiliates have received many accolades, including membership to the National Academy of Sciences and National Academy of Engineering, the ACM SIGCOMM Award, the IEEE Internet Award, and numerous best paper and test-of-time awards.



WHAT MAKES ICSI DIFFERENT?

As one of the few independent, non-profit research institutes in computer science and data science research in the U.S., we foster a uniquely flexible and collaborative intellectual environment.

It's about big ideas. ICSI is a place for facing daunting challenges—not “playing it safe.” Our researchers pursue questions they feel are in the public interest, and advance technologies that address important societal needs. This transformative work spans across disciplines, sectors, and borders, often creating pathways to entrepreneurship and influencing policy decisions.

It's about solving problems, not submitting papers. Unlike industry or academia, ICSI is free from a “publish or perish” culture. We may write traditional research papers, but we can just as easily release software, curate a dataset, or spin out a startup company. Our researchers leverage strong ties with UC Berkeley and the Silicon Valley ecosystem to bring great ideas to fruition in whatever way is best suited to the problem at hand.

It's about inclusion. ICSI welcomes people from all over the world and across sectors. International collaboration is central to our mission, and we have hosted visiting scientists and more than 600 postdocs from five continents. We eschew discrimination and harassment, and cultivate an environment that welcomes women, people of color, LGBTQ+ people, and people who are members of other underrepresented communities. We believe diverse perspectives create the best ideas.



SOCIAL

email: info@icsi.berkeley.edu

web: www.icsi.berkeley.edu/icsi

twitter: @ICSlatBerkeley

linkedin: ICSI - International Computer Science Institute

A PLACE FOR BIG IDEAS

- Early ICSI research produced seminal results in speech, AI, hardware, and theory, including a pioneering lexical database (FrameNet), the first single-chip vector processor (Torrent), the first practical rateless codes, and a novel theory of human language and thought.
- More recently, ICSI work has underpinned the world's leading platform for network security monitoring (Zeek) and played a critical role in the development of software-defined networking, network function virtualization, and distributed hash tables.

A PLACE FOR LAB-TO-MARKET ENTREPRENEURSHIP

- Technologies incubated at ICSI have spun off startups and many ICSI alumni have gone on to form successful companies. Examples include Nicira Networks (founded in 2007, sold to VMware in 2012 for over \$1 billion), Corelight (founded in 2013, attracting \$160 million in venture funding to date), and others including SciFive, Xorp, Digital Fountain, Nefeli Networks, AppCensus, and BitRipple.

OUR CURRENT PASSIONS

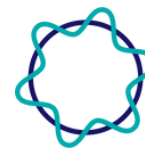
- We're helping to usher in the next phase in big data and ML with a focus on practical theory for neural network generalization and developing principled methods to couple data-driven ML models and domain-driven scientific models.
- We're bringing together computational scientists and social scientists to examine the confluence of human decision-making and technology to improve privacy and security in the design of wearables, IoT devices, and related systems.
- We're creating new visions for Internet architecture, the cellular ecosystem, the cloud computing ecosystem, IoT application frameworks, science cyberinfrastructure, advanced manufacturing, and AI and natural language processing, among other areas.

IS ICSI YOUR NEXT INTELLECTUAL HOME?

We welcome researchers in any computationally related field, from any country, and at any career stage.

- Choose from a variety of employment models, from full-time research positions to part-time and temporary engagements. ICSI positions are soft-money positions funded through grants and collaborations.
- Expand your horizons and build connections in Silicon Valley. Many ICSI scientists have held joint appointments with UC Berkeley, government research laboratories (such as Lawrence Berkeley National Lab), industry (such as Amazon and Google), or social impact organizations.
- Build teams with long-term research staff and benefit from student involvement without the teaching and service requirements of a degree-granting program.
- Enjoy generous benefits and an open, collaborative environment. We value our employees' health and well-being and support flexible, remote, and hybrid work options.

We're always looking for researchers, graduate students, and collaborators!



Academic
Data Science
Alliance

ADSA EVENT SPONSORSHIP

Sponsorship enables ADSA to bring you engaging and productive events, including the Data Science Leadership Summit and ADSA Annual Meetings. Sponsorship also promotes access to a wider, more diverse audience by enabling live streaming, video recording, captioning, scholarships and more.

WHICH EVENTS CAN I SPONSOR?

- Data Science Leadership Summit
- ADSA Annual Meeting
- XD's (cross-discipline events)

WHAT ARE THE SPONSORSHIP LEVELS?

- Platinum (\$15,000)
- Gold (\$10,000)
- Silver (\$7,500)
- Bronze (\$5,000)
- Contributor (\$2,000)
- Supporter (\$1,000)
- Custom sponsorship (contact us with your ideas!)

See a full list of sponsorship
levels and benefits at
tinyurl.com/ADSA-event-sponsorship

I'M READY! WHAT'S NEXT?

Send an email to info@AcademicDataScience.org
and let's discuss the options!



Learn more:
tinyurl.com/ADSA-event-sponsorship

Sponsoring an ADSA event is easy as 1, 2, 3!



STEP 1:
Choose which meeting
to sponsor



STEP 2:
Choose a sponsorship level



STEP 3:
Contact us to kick off
your sponsorship!

Data Science and Data Analytics

SUMMARY

James Madison University has data science or data analytics incorporated in various forms in many departments. Starting Fall 2023 the Mathematics & Statistics department has been tasked with building degree and other credentialed programs in data science at JMU.

ORGANIZATIONAL STRUCTURE

JMU's Data Science Program is housed within the Dept. of Mathematics & Statistics

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Data Science concentration to the Statistics major
- Data Analytics minor

SOCIAL

email: mathstat@jmu.edu

web: jmu.edu/mathstat

twitter: @JMU

facebook:

[@JamesMadisonUniversity](https://www.facebook.com/JamesMadisonUniversity)

youtube:

[youtube.com/DukeDogTV](https://www.youtube.com/DukeDogTV)

instagram:

[@jamesmadisonuniversity](https://www.instagram.com/jamesmadisonuniversity)

LOCATION

Roop Hall, MSC 1911

60 Bluestone Drive

Harrisonburg, Virginia 22807

PROGRAM OVERVIEW

The data science program at JMU is in its infancy but the intended goal is to focus on networks and climate science. To this end, the College of Science & Mathematics is building an Environmental Data Science cohort housed in several departments. The Mathematics & Statistics department is also building specific degree programs in data science.



DATA ANALYTICS MINOR

The minor in data analytics is designed for students majoring in a STEM field who want to gain additional technical competencies in statistical data analytic methods as it relates to their field of study. This minor will provide students with analytical and technical skills in the ethical use of data in research environments, application of statistical and probabilistic thinking to data analysis, data visualization and data management, and application of machine learning techniques to their own field of study.



College of Basic and Applied Sciences

MIDDLE TENNESSEE STATE UNIVERSITY

SUMMARY

Middle Tennessee State University offers Data Science degrees at all levels (BS, MS, and PhD) that emphasize the interdisciplinary nature of Data Science. MTSU also contains the Data Science Institute, which is an applied research focused entity that strives to help its partners solve complex problems.

ORGANIZATIONAL STRUCTURE

Our interdisciplinary academic programs at all three levels are housed in the College of Basic and Applied Sciences; the Data Science Institute does research and outreach.

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- BS in Data Science
- MS in Data Science
- Ph.D. in Computational and Data Science
- Data Science Graduate Certificate

PROGRAM STATISTICS

- Number of Staff: 4
- Affiliated Faculty: 18
- Students enrolled in data science related programs (Spring 2023):
 - 73 BS
 - 30 MS
 - 32 PhD
 - 17 Grad. Certificate

LOCATION

1301 E Main St
Murfreesboro, TN 37132

PROGRAM OVERVIEW

The Data Science Bachelor's Degree at MTSU was announced in February of 2020. Even with the challenges of going remote, the program has exceeded enrollment expectations and has a vibrant community of students. This degree program combines classes from several different departments in two different colleges to give students the skills to use data to solve problems. Students gain a core set of knowledge and then choose one of the three cognates to specialize in: Machine Learning,

Business Intelligence and Analytics, and Inferential Thinking. There is also enough flexibility in the program that students can complete a minor in a field of interest to them. At the end of the program, students take a capstone course that combines all the knowledge they have gained into one project.



FOSTERING INCLUSIVE EXCELLENCE

MTSU started offering a graduate certificate in Data Science in 2020, and the Master's Degree in Data Science started in Fall 2022.



The graduate certificate is an online program consisting of four courses with "Data Dive" events at the end of each course. During the Data Dives, students work in groups at an all-day event to use the course knowledge to analyze a data set.

The Master of Science in Data Science Program brings computer science, applied mathematics, and statistics together to prepare its graduates for seeking careers in data science or pursuing PhD in relevant areas. The curriculum contains a blend of theory and practice of computer science and applied mathematics in order to draw insights and to extract information from large data.



SOCIAL

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linkedin: MTSU Data Science

facebook: MTSU Data Science

DATA AND OUR COMMUNITY

The existing Computational Science Ph.D. program at MTSU was recently renamed The Computational Science and Data Science (CDS) program. Computer models and computer simulations have become an essential part of the research repertoire. Going from application to computational results requires domain expertise, mathematical modeling, numerical analysis, algorithm development, software implementation, and the validation and visualization of results.



The increasing complexity of data sets has also become a significant challenge. Collecting and storing data has become easy, but the sheer volume of data produced across the disciplines has made traditional data analysis nearly impossible. The only way to survive this flood of data is to combine computer science, statistics, visualization, and numerical techniques into automated methods for discovering patterns within the numbers. Using domain expertise and cutting-edge techniques, we transform bits into understanding.

Because elements from several disciplines are utilized in the CDS program, integrating knowledge and methodologies differentiate this program from those with a singular focus. We use foundational areas such as computer science and numerical methods to enable cutting-edge research across disciplinary boundaries.

OUTREACH AND EDUCATION

The Data Science Institute at MTSU has the goal to take complex data and turn it into actionable information that adds value to an organization. The Institute is responsible for outreach to industry leaders and to K-12 educators in the area. The Institute is also an entity for research in Data Science, bringing together research-focused faculty and staff with possibilities for collaborations across discipline boundaries.



DATA SCIENCE

SUMMARY

Established in May of 2022, the Data Science Program at MSU prepares students to meet the growing demand for data science experts in the context of ongoing digital transformation. The program supports and expands data science within the university under the governance of an intercollege faculty committee.

ORGANIZATIONAL STRUCTURE

Cross-departmental program housed within the Office of Academic Affairs

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- MS/BS/Minor in Data Science
- Specializations in:
 - Business Information Systems
 - Computational Agriculture & Natural Resources
 - Computational Intelligence
 - Geoinformatics
 - Marketing & Supply Chain Analytics
 - Psychoinformatics
 - Social Data Analytics
 - Development Informatics
 - Statistical Modeling
 - Digital Twins
 - Visualization & Visual Analytics for the Built Environment
 - Quantum Computing
 - Sports Science, Sports Administration, & Human Performance
 - Data Science Pedagogy

PROGRAM STATISTICS

- Number of Core Faculty: 2
- Number of technical staff: 1
- Affiliated Members: 148
- Number of students enrolled: 15 undergraduate, 17 graduate

LOCATION

133 Etheredge Hall
Mississippi State, MS 39762

PROGRAM OVERVIEW

The Data Science Program at Mississippi State University (MSU) innovates in three key ways: its governance model, approach to the field of data science, and delivery of curriculum.

Governance Model

The intercollege Data Science Program at MSU, organized within the Office of the Provost, functions as a coordinating unit to support and expand data science at MSU under the general governance of the Data Science University Committee composed of two representatives from each college on campus. Over 148 faculty are involved in instruction relating to core courses and specializations. The program also supports the work of over 400 faculty and staff who identify as either data science users or experts.

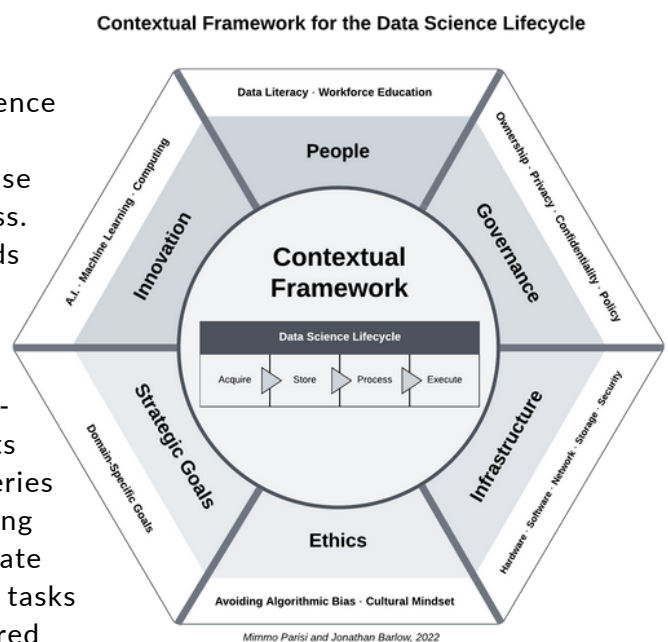
The MSU data science program grows by strengthening the departments that make up the core curriculum, including business information systems, computer science and engineering, mathematics and statistics, and communications.

The program offers a Bachelor of Science in Data Science, a Minor in Data Science, a Master of Science in Data Science, and a graduate certificate in Data Science Pedagogy.

DATA FOR HUMAN PROGRESS

MSU approaches data science as the field that advances methods to improve the use of data for human progress. Specifically, these methods allow humans to

1) Represent the world with virtual data objects through a process of data-fication; 2) Extract insights and facilitate new discoveries about the world by studying these data objects; 3) Create smart systems to perform tasks that have ordinarily required human intelligence; and 4) Increase the performance (scale, scope, and speed) of organizations as they produce or deliver virtual and tangible goods and services.





SOCIAL

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DATA FOR HUMAN PROGRESS, CONT'D.

This definition of data science places the data lifecycle within a contextual framework (see diagram) that emphasizes the role of scientific innovation (A.I. and Computing), people (workforce education and data science literacy), governance (ownership, privacy and confidentiality, and policy), infrastructure (hardware, software, network, storage, and security), ethics (the avoidance of algorithmic bias and a cultural mindset to use data to promote human flourishing), and the strategic goals that guide organizations in specific domains.

CURRICULUM DELIVERY

MSU's undergraduate curriculum delivery incorporates three central innovations: first, we provide a traditional liberal arts approach emphasizing strengths in communication, analytical thinking, and imagination. This gives students the opportunity to reflect on how their learning impacts their lives and the lives of fellow humans. Second, opportunities for experiential learning allow students to deepen their understanding of diversity and teamwork while gaining technical fluencies that enable success in an increasingly digitally connected and operated world. Third, a personalized success plan allows us to work with students in a coherent way from the time they arrive on campus to the moment they leave the university and enter the workforce. In this way, the student's experience becomes the organizing principle of all support, advising, and academic counseling activities. These three ingredients provide students with the confidence and tools they need to reach their educational and career goals.



The program is designed to produce experts able to apply data science within one of several concentrations. This requires three general areas of coursework: general education (30 hours) to develop critical thinking and writing skills; a program core (63 hours) of computer science, statistics, mathematics, business information systems, communications, and data science courses; and applications of the data science program core in a specific concentration (30 hours). Students in the program engage in a series of five hands-on data science labs to support their experiential learning: Data Wrangling, Statistical Inference, Data Visualization, Artificial Intelligence, Cloud, Quantum, and High-Performance Computing. Labs and coursework equip students as they enter a two-semester senior capstone in an area of concentration in which they are given the opportunity to work with a business organization or to be engaged in a research project in a university research center or academic department.

Concentration areas for the undergraduate major are designed by MSU colleges and include Business Information Systems, Computational Agriculture and Natural Resources, Computational Intelligence, Geoinformatics, Marketing and Supply Chain Analytics, Psychoinformatics, Social Data Analytics, Statistical Modeling, and Visualization and Visual Analytics for the Built Environment.

SUMMARY

In addition to the Institute for Data Science, NJIT established the Department of Data Science in 2021 as the newest addition to the Ying Wu College of Computing. The Department of Data Science offers under-graduate and graduate degrees, as well as graduate certificates, giving students the knowledge and skills needed to find success in the rewarding field of data science. To learn more about the programs offered please visit ds.njit.edu/programs.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- B.S. in Data Science
- M.S. in Data Science
- M.S. in Artificial Intelligence (AI)
- Ph.D. in Data Science
- Certificate in Big Data Essentials
- Certificate in Data Mining
- Certificate in Data Visualization
- Graduate Certificate in AI

PROGRAM STATISTICS

- Faculty: 9
- Affiliated Faculty: ~40
- Technical staff: 2

LOCATION

Newark, New Jersey

PROGRAM OVERVIEW

Headed by Distinguished Professor David Bader, the Institute for Data Science focuses on cutting-edge interdisciplinary research and development in all areas pertinent to digital data. Beyond academic research, the institute interacts closely with the outside world to identify and solve important problems in the modern data-driven economy.

RESEARCH AT NJIT

The Institute houses four research centers: the Center for Big Data; Cybersecurity Research Center; Structural Analysis of Biomedical Ontologies Center (SABOC); and the newly established Center for AI Research.



MISSION OF THE DEPARTMENT OF DATA SCIENCE

The Mission of the Department of Data Science is to:

- Educate students in a field that has ushered in a once-in-a-generation revolution, comparable to the industrial revolution and the original computing revolution.
- Provide an environment for leading-edge research that has a strong and rapid impact on the economy and that reestablishes New Jersey as a world leader in technological advancement.
- Create a source of scholarship on the many technical, ethical, and privacy issues that ubiquitous data creation is constantly confronting us with.
- Establish a center of technology knowledge and a "go-to organization" to service data creators, providers, managers, curators, and users of the State and the Nation.

Vision Statement:

The data revolution has created novel challenges and unprecedented opportunities. The vision of the Department of Data Science is to create a first-class academic department that trains the next generation of students as data scientists who will solve these grand challenges and innovate through world-class research to take advantage of these opportunities.

NEW PROGRAMS IN 2023

The **Ph.D. in Data Science** is jointly administered by the Dept. of Data Science in the Ying Wu College of Computing and the Dept. of Mathematical Sciences in the College of Science and Liberal Arts. The program offers two options with significant overlap between them.

Students graduating with a Ph.D. degree in Data Science will gain the skills, knowledge, and professional training that will enable them to pursue data science careers in a broad range of industrial sectors, startups, academia, and government institutions. The primary goal of the Ph.D. in Data Science is to enable students to pursue competitive professional and academic careers, swiftly advancing to leadership positions, and to contribute to the creation of novel insights and knowledge in the field.



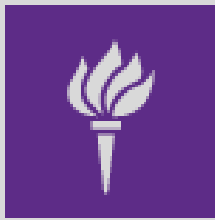
The **M.S. in Artificial Intelligence** and **Graduate Certificate in Artificial Intelligence** equip students with the theoretical and practical knowledge in applied machine learning and AI techniques to formulate solutions to real-world problems.

AI uses computers and modern software technology to achieve the outcomes of human problem-solving and decision-making abilities, and comprises methods to solve problems that are easy for humans but hard for digital computers. Numerous industries, including manufacturing, healthcare, finance, and even the fight against climate change, use AI. Students will have the opportunity to collaborate with faculty on projects involving applications in bioengineering, healthcare, cybersecurity, data analytics, finance, and many other fields.

SOCIAL

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web: datascience.njit.edu



NYU

Center for Data Science

NEW YORK UNIVERSITY

SUMMARY

The Center for Data Science is the focal point for New York University's university-wide efforts in Data Science. CDS was established to advance NYU's goal of creating a world-leading Data Science training and research facility, and equipping researchers and professionals with the tools to harness the power of Big Data.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Undergraduate Major in Data Science
- Undergraduate Joint Major in Computer Science and Data Science
- Undergraduate Joint Major in Data Science and Mathematics
- Undergraduate Minor in Data Science
- Master's in Data Science
- PhD in Data Science

LOCATION

60 5th Avenue
New York, NY 10011



ABOUT THE CENTER FOR DATA SCIENCE

The Center for Data Science (CDS) was established in 2013 to advance NYU's goal of creating a world-leading Data Science training and research facility, and arming researchers and professionals with the tools to harness the power of Big Data.

Today, CDS counts 21 jointly appointed interdisciplinary faculty housed on three floors of our magnificent 60 5th Avenue building, one of New York City's historic properties. It is home to a top-ranked MS in Data Science program, one of the first PhD programs in Data Science, and a new undergraduate program in Data Science, as well as a lively Fellow and Postdoctoral program. It has over 60 associate and affiliate faculty from 25 departments in 9 schools and units. With cross-disciplinary research and innovative educational programs, CDS is shaping the new field of Data Science.



SOCIAL

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linkedin: NYU Center for Data Science

facebook: @nyudatascience

instagram: @nyucds

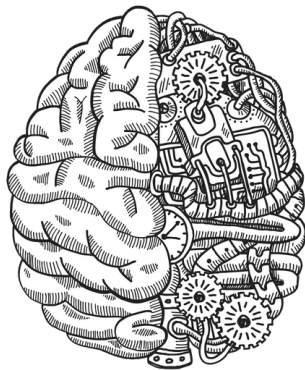
medium: nyudatascience.medium.com

CDS RESEARCH

As CDS continues to establish itself as a leader in data science education and research, the center has focused on developing and expanding a number of academic research initiatives.



- **The Center for Responsible AI (NYU R/AI)** focuses on making “AI” synonymous with “responsible AI.” The Center conducts research that engages in AI policy and regulation as well as teaching different constituents about AI and its social impact.
- **Minds, Brains, and Machines** is a joint effort by CDS, the Department of Psychology, the Center for Neural Science, and the Flatiron Institute. The research of MBM sits at the intersection of data science and cognitive science, leveraging progress in machine intelligence to advance our understanding of human intelligence.



- **The ML² Research Group** consists of a team of researchers at NYU working on developing and studying state-of-the-art machine learning methods for natural language processing (NLP).
- The **Math and Data (MaD)** group, a shared initiative, with CDS and the NYU Courant Institute, aims to advance the Mathematical and Statistical foundations of Data Sciences, specializing in signal processing and inverse problems, machine learning and deep learning, and high-dimensional statistics and probability.
- The **STAT group (Statistics: Tools, Algorithms, and Theory)**, a joint effort with CDS and the NYU Courant Institute, seeks to advance the state-of-the-art in statistics, by developing new methodological, computational, and mathematical approaches to statistical problems and to their applications in data science and machine learning.

SUMMARY

NC State launched the Data Science Academy (DSA) in July 2021 to build data science efforts across all university colleges and to address all pillars of its mission: research, teaching and outreach to the state of N.C. **Rachel Levy**, professor of mathematics, is the DSA's Executive Director.

ORGANIZATIONAL STRUCTURE

Cross-departmental
Institute/Center

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- 600 students enrolled in twenty 1-credit, project-based course sections in the '22-'23 AY.
- DSA is developing data science certificates in collaboration with multiple departments and programs.
- Graduate and undergraduate units have integrated DSA courses into their programs of study.

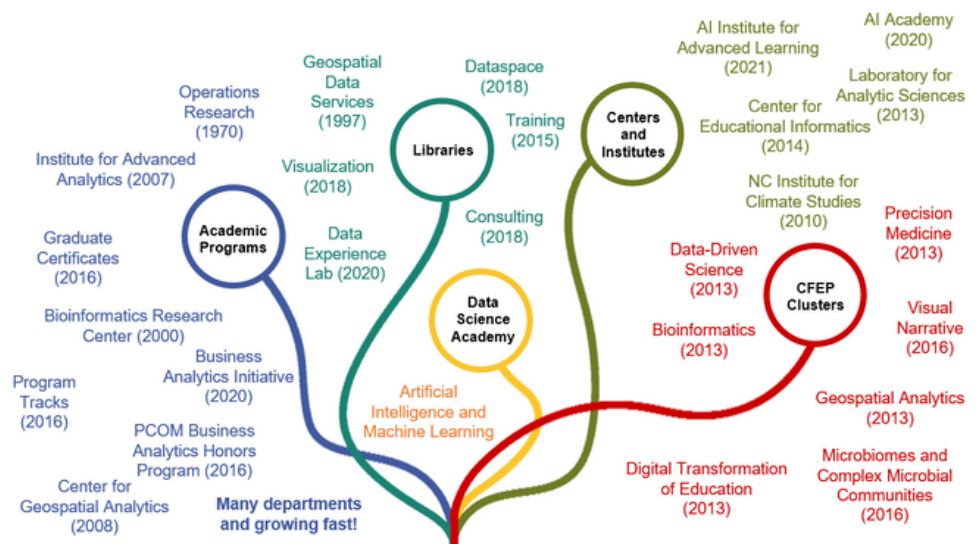
LOCATION

Raleigh, NC 27695-0001

DATA SCIENCE AT NC STATE

When the DSA launched, Chancellor Randy Woodson noted "Data science is integrated in subject matter and research programs across all 10 NC State colleges and is part of our 'think and do' mindset. At NC State, we believe data science is for everyone."

The DSA is part of strengthening interdisciplinary connections between data science initiatives at NC State, as illustrated below.



RESEARCH ENABLEMENT

The DSA collaborates with the NC State Science House, Friday Institute and the NC School of Science and Mathematics to develop interdisciplinary collaborations across campus. Seed grants and networking opportunities spark new conversations and collaborations.

INDUSTRY PARTNERSHIPS

The DSA works with the NC State Office of Partnerships to build connections with local, national and global industrial partners in research collaborations and workforce development.

AGRICULTURAL EXTENSION

Farmers and extension agents across North Carolina are using data every day to make critical decisions about all aspects of agriculture. The DSA supports development of their data science expertise.

PK-12 OUTREACH

In collaboration with the NC State Science House and Friday Institute, the DSA is building data science opportunities for students and teachers across North Carolina and beyond.

SOCIAL

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linkedin: NCStateDSA

facebook: @NCStateDSA

instagram: @NCStateDSA

FALL 2022 EVENTS



Ag Science Data Jam

In partnership with the N.C. Plant Sciences Initiative and SAS, the DSA co-hosted the Ag Data Science Jam on September 7, 2022. It was designed for Faculty and industry professionals in agriculture and data science to collaborate in a workshop demystifying data analytics using agricultural datasets.



Data Science Career Expo

The DSA hosted our first in-person career expo on October 17, 2022. Over 25 employers registered for the event and over 200 students attended. Both undergraduate and graduate students were able to connect with various companies that were both local and national.

SPRING 2023 EVENTS

Virtual Data Science Career Expo

The DSA will host a virtual career expo focused on data science opportunities to extend the services from the successful Fall Career Expo. Students and employers will be able to connect virtually for job opportunities and summer internship opportunities.



DataFest

Students from all disciplines will compete in teams to tackle this year's big data challenge. Students are provided with resources to complete the challenge in just 24 hours.

Models for Sustainable and Inclusive Data Science Consulting and Collaboration in Higher Education Workshop Series

Funded by the Alfred P. Sloan Foundation, the NC State Data Science Academy (DSA) and NC State Libraries are partnering with the Academic Data Science Alliance (ADSA) to lead the Models for Sustainable and Inclusive Data Science Consulting and Collaboration in Higher Education workshop series. This series will focus on mechanisms for delivering data science research support via consulting and collaboration models, as well as developing policies and discussing infrastructure that supports robust, inclusive and sustainable practices.

DATA ANALYTICS RESEARCH CONSULTING



The DSA collaborates with the NC State University Libraries to provide analytics consulting.



Emily Griffith, DSA Director of Analytics Consulting and associate research professor of statistics, leads an interdisciplinary corps of graduate research assistants to provide data science expertise across campus.

1-Credit Project-Based Courses:

- Biomed. Data Sharing
- Data Communication
- Data in Motion
- Social Good Internships
- Data for Policy
- Data Physicalization
- Data Science Cybersecurity
- Data Science Sustainability
- Data Visualization
- Data Wrangling and Scraping
- Epidemiology: Disease & Disparities
- Exploratory Data Analysis
- Intro R/Python for Data Science
- ML for Computer Vision
- R for Data Science and Viz
- R for Social Sciences
- Reproducibility and Containers
- Scientific Programming with Python
- Social Media Data, Ethics, and Theory
- Topic Modeling: ML and Clustering

**At NC STATE,
data science is
for everyone!**



NORTHWESTERN INSTITUTE ON COMPLEX SYSTEMS

NORTHWESTERN UNIVERSITY

SUMMARY

NICO's mission is to incubate innovative collaborations that leverage complexity, networks, and data science to address societal challenges. Faculty initiatives nurtured by NICO are transforming areas as disparate as synthetic and quantitative biology, sustainability and resilience engineering, computational social sciences, business, and the law.

ORGANIZATIONAL STRUCTURE

NICO is a university-wide initiative

PROGRAM STATISTICS

- Affiliated faculty: 83
- Undergraduate students:
 - 375 minors
 - 138 majors

LOCATION

600 Foster Street
Evanston, IL 60208

THE DATA SCIENCE REVOLUTION

We live in a world where not just the amount, but also the diversity and complexity, of digital information continues to grow exponentially. Materials simulations and astronomy images are pushing the boundaries of exploration. Social networks enable the exchange of information between billions of individuals; medical devices, GPS devices and bar code scanners allow the exchange of information between machines.

Importantly, “bigger is not just better, it is different:” This is what researchers and entrepreneurs across the academic, government, and private sectors realize as the data science revolution continues to unfold and affect our scientific inquiry process. Figuring out how to efficiently, effectively, and reliably extract new knowledge from big and/or complex datasets presents us with new algorithmic and practical challenges, but also enables us to ask new questions.



NORTHWESTERN'S DATA SCIENCE INITIATIVE

At Northwestern, we address data science from a different perspective. We contend that data science is not about the absolute size of the data, but about a change in scale. Indeed, we believe that all knowledge creation fields are being transformed by the relative increase and scale of the data available to scholars.

Data science is affecting every aspect of Northwestern's learning and research enterprises. The Data Science Initiative was established in 2015 and is managed by the Northwestern Institute on Complex Systems (NICO).



SOCIAL

email: nico@northwestern.edu

web: datascience.northwestern.edu

twitter: @NICOatNU

linkedin: Northwestern Institute on Complex Systems - NICO

facebook: Northwestern Institute on Complex Systems - NICO

youtube: @nicoatnu

DEGREES, PROGRAMS, AND SPECIALIZATIONS

Undergraduate degrees:

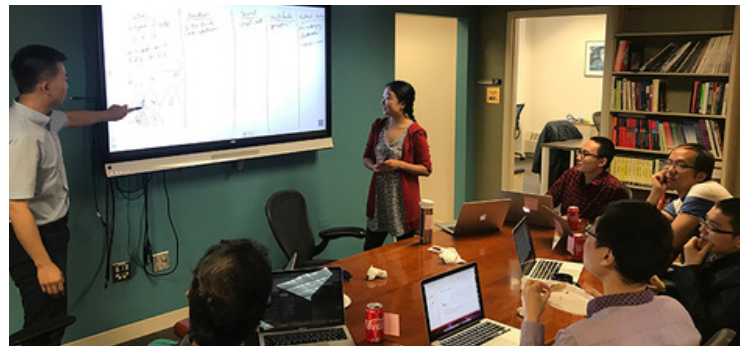
- Major in Data Science (offered by Department of Statistics)
- Minor in Data Science (offered by Department of Statistics)
- Data Science and Engineering Minor (offered by School of Engineering)

Master's degrees:

- Master in Data Science (offered by School of Professional Studies)
- Master of Science in Analytics (offered by School of Engineering)
- Master of Science in Artificial Intelligence (offered by School of Engineering)

Data Science Certificates:

- Integrated Data Science Certificate (offered by CIERA)
- Health Sciences Integrated Program (offered by School of Medicine)
- Analytics and Modeling (offered by School of Professional Studies)
- Analytics Management (offered by School of Professional Studies)
- Data Engineering (offered by School of Professional Studies)
- Artificial Intelligence (offered by School of Professional Studies)



FACULTY RESEARCH NETWORKING LUNCHEONS

Interdisciplinary groups of faculty meet monthly during the academic year for discussion and exploration of significant and upcoming research areas with a strong data science and analysis focus. Overall goals of this “interdisciplinary research networking” model include new faculty connections and collaborations, innovative research agendas, collaborative publications, research grant proposals, potential new and joint hires, and identification of funding opportunities and new projects.



THE OHIO STATE UNIVERSITY

TRANSLATIONAL DATA ANALYTICS INSTITUTE

SUMMARY

The Translational Data Analytics Institute is a community of researchers at the forefront of interdisciplinary, data-enabled science, scholarship and creative expression with an emphasis on significant societal impact. Its >270 faculty affiliates collaborate across 60+ disciplines to innovate data science and analytics solutions for the greater good.

ORGANIZATIONAL STRUCTURE

We are a university-level institute that rolls up to the Office of Research

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Master in Translational Data Analytics (MTDA)
- Other data science-related academic programs exist at Ohio State, but the MTDA was designed and is administered by TDAI

PROGRAM STATISTICS

- Core faculty: 38
- Affiliated researchers: 270+
- Professional staff: 10
- Students: 42 in the MTDA program

LOCATION

1760 Neil Ave
Columbus, OH 43210

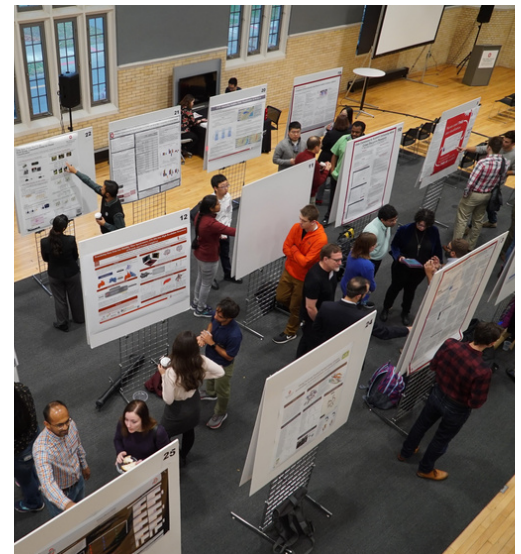
OUR HISTORY

The Translational Data Analytics Institute (TDAI) was established at Ohio State in 2015 as a foundational component of the university's \$500 million Discovery Themes initiative to address grand challenges—a recognition of big data's significance in answering the most pressing questions in science and solving the most vexing problems of the human condition. The institute was designed to foster the interdisciplinary study, development and application of data science and analytics solutions among its 38 core faculty and 270+ affiliates, as well as students across Ohio State's 15 colleges. In 2019, TDAI opened a 21,000-square-foot home in historic Pomerene Hall, the result of a \$125 million joint investment by the university and state of Ohio to create a regional hub of data science and analytics collaboration and excellence.

OUR RESEARCH AND SCHOLARSHIP

Although collective research and scholarship interests of our faculty affiliates are quite broad and diverse, the Institute has focused on 5 strategic directions: Foundations of AI; Smart Mobility; Responsible Data Science; AI & Health; and Environment & Sustainability. The value that the Institute brings to our faculty-led research efforts in these strategic areas is the ability to facilitate internal and external partnership-building across numerous disciplines. We do this by awards of funding and in-kind resources for research pilots, extramural proposal development, and early-stage idea exploration; data science consulting services; post-

doctoral fellowships; seminar series; research infrastructure; facilitated ideation sessions; and data science and analytics workshops to support training of students and postdocs on faculty-led research teams. Our approach has proven to be successful, as evidenced in part by promotion and tenure of many of our core faculty; increased submissions of large interdisciplinary research proposals to extramural funding agencies; and the recent award of 3 NSF-funded institutes: AI Institutes in cyberinfrastructure and edge computing, and an HDR Institute in a new field of imageomics.





SOCIAL

email: tdai@osu.edu

web: tdai.osu.edu

twitter: [@OSUbigdata](https://twitter.com/OSUbigdata)

linkedin: [Translational Data Analytics Institute](#)

OUR TRAINING AND EDUCATION PROGRAMS

In 2020 TDAI launched a Master's degree program in translational data analytics to upskill and reskill working professionals. This program is a partnership between TDAI, the Graduate School, the Advanced Computing Center for Art & Design, and the Departments of Statistics, Design, and Computer Science and Engineering. The MTDA integrates design thinking into foundations of data science, programming, machine learning, and data visualization, uniquely positioning students to be master data storytellers. TDAI also provides non-traditional training opportunities, for instance by employing undergraduate students in our Data Science Consulting Services and by providing summer fellowships in government agencies to graduate students.



OUR OUTREACH

TDAI's Data Science Summer Camp serves as an exemplar of the Institute's intentional efforts to broaden participation in STEM fields. The camp is a week-long program designed for middle school students to increase exposure to data and analytics earlier in their education using a fun, hands-on approach to learning. The camp is an ecosystem of learning at all levels with TDAI faculty and graduate students designing and teaching modules, and undergraduate data analytics student majors volunteering to help campers learn new analytics and programming skills. The camp strengthens effectiveness of faculty broadening participation, as faculty leverage the camp platform by designing new modules in grant proposals to external funding agencies. The NSF-supported Imageomics Institute was successfully funded to develop camp modules, and TDAI implemented one of these modules in its 2022 camp.



Institute for Computational and Data Sciences

SUMMARY

Penn State's diverse Data Science portfolio includes research and educational programs at many of the University's 24 campuses and 16 academic colleges. Academic units offer degree programs aligned with their disciplinary focus, and the interdisciplinary Institute for Computational and Data Sciences (ICDS) provides University-wide data sciences research support.

ORGANIZATIONAL STRUCTURE

The Institute for Computational and Data Sciences is one of seven interdisciplinary research institutes within Penn State's Office of the Senior Vice President for Research. ICDS brings researchers together to develop and apply innovative, high-performance computation and data science methods.

SOCIAL

email: icds@psu.edu

web: icds.psu.edu

LOCATION

224 Computer Building
University Park, PA 16802

PROGRAM OVERVIEW

Penn State offers Undergraduate Degree programs and Minors; Master's Degree programs; Ph.D. programs; and Graduate Certificates in a number of different data science specializations.



Credit: Patrick Mansell / Penn State

Undergraduate Degree Programs and Minors include:

- Bachelor of Science in Data Sciences
- Bachelor of Science in Social Data Analytics
- Digital Media Trends and Analytics, Minor

Master's Degree Programs include:

- Master of Professional Studies in Data Analytics
- Master of Science in Data Analytics
- Master of Informatics (Data Science Concentration)
- Master of Science in Spatial Data Science (Online)

Ph.D. Programs include:

- Dual-Title Ph.D. in Social Data Analytics

Graduate Certificates include:

- Graduate Certificate in Marketing Analytics
- Graduate Certificate in Business Analytics



TEXAS A&M
Institute of
Data Science

Institute of Data Science

TEXAS A&M UNIVERSITY

SUMMARY

The Texas A&M Institute of Data Science (TAMIDS) pursues new approaches to Data Science research, education, operations and partnership. These approaches cross college boundaries to connect elements of Data Science from engineering, technology, science and the humanities, and inform wider social challenges.

ORGANIZATIONAL STRUCTURE

University Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- MS in Data Science
- Certificate in Data Analytics for the Petroleum Industry
- Thematic Data Science Labs
- Professional Education
- Capstone Industry Mentorship
- Hackathon Sponsorship
- Visiting Researcher Program

PROGRAM STATISTICS

- Number of staff:22
- Affiliated Faculty: 216
- Students:41

SOCIAL

email: duffieldng@tamu.edu

web: tamids.tamu.edu

linkedin: Texas A&M Institute of Data Science

facebook: @TamuDataScience

LOCATION

John R. Blocker Building, Suite 227
155 Ireland Street, TAMU 3156
College Station, TX 77843-3156

EDUCATION

The **Master of Science in Data Science** degree is an on-campus interdisciplinary program with tracks offered by the Texas A&M Departments of Computer Science and Engineering, Electrical and Computer Engineering, Mathematics, and Statistics, with coordination across departments by TAMIDS. The **Undergraduate Certificate in Data Analytics for the Petroleum Industry** draws students from the Texas A&M Colleges of Engineering, Science, Geosciences, and the Mays Business School, and is managed by TAMIDS and the Department of Petroleum Engineering. Our programs follow the Curricular Paths framework that helps students from diverse disciplines prepare to work in interdisciplinary teams, through Capstone and Practicum courses.

TRAINING AND WORKFORCE DEVELOPMENT

TAMIDS Training offers bootcamps, webinars, and summer courses to help students, researchers, and faculty develop skills through hands-on experience in Data Science. The **Professional Education Workshops in Data Science Foundations and Computational Practice** help technical specialists extend their expertise to encompass the systems, methods, and tools of Data Science.

THEMATIC DATA SCIENCE LABS

TAMIDS Thematic Labs develop knowledge, resources, and community around emerging areas of Data Science, encompassing research, education, and outreach. Each lab pilots new interdisciplinary research develops for-credit courses, training, and case studies, and hosts a program of seminars and workshops. The **Scientific Machine Learning Lab** combines Scientific Computation and ML to incorporate scientific model constraints in ML algorithms and enable prediction of performance of complex multiscale, multiphysics systems using sparse, low-fidelity, and heterogeneous data. The **Data Justice Lab** brings together computational data scientists and social justice-oriented social scientists to use and study the impact of Data Science in social domains such as health, education, the built environment, crisis management, and economics. The **VIVID Lab for Visceral Intersensory Visualization & Information Design** takes visualization beyond the traditional notion of a visual display to encompass interaction with information through sensors, AR and VR, craft, and fabrication. The **Operational Data Science Lab** works with Texas A&M infrastructure and administration to capitalize on institutional data investments, improve campus operations, and engage Texas A&M researchers in working on operational problems.

PARTNERSHIP AND ENGAGEMENT OPPORTUNITIES

TAMIDS partners with industry for student engagements including sponsorship of capstone projects, hackathons, and competitions, and develops certificate programs preparatory for emerging industry needs. TAMIDS matches our faculty affiliates to industrial opportunities. The TAMIDS visitor program supports researchers from universities, research labs and industry to collaborate with TAMIDS and the broader TAMU Data Science community.

Data Intensive Studies Center

TUFTS UNIVERSITY

SUMMARY

The Data Intensive Studies Center at Tufts is a cross-university center focused on enabling data-intensive research, scholarship and education.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Data Science M.S.
- Data Analytics M.S.
- Data Science Certificate
- Data Analytics Certificate
- Specializations in:
Biomedical statistics,
bioinformatics, Bayesian
statistics, algorithmic
fairness, machine
learning, agent-based
modeling, uncertainty
quantification, scientific
computing,
computational
mathematics.

PROGRAM STATISTICS

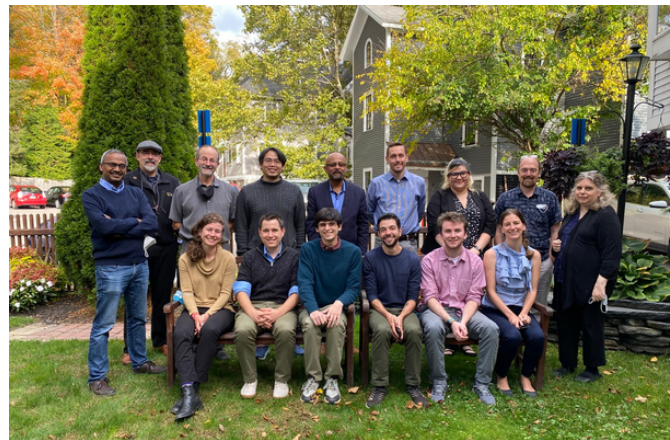
- Number of faculty: 3
- Number of staff: 7
- Affiliated Faculty: 6
- Students: 100

LOCATION

Joyce Cummings Center
177 College Ave.
3rd Floor Suite 336
Medford, MA 02155

PROGRAM OVERVIEW

The Data Intensive Studies Center serves as a vital hub that cultivates collaborations and fosters a culture where computational, data and statistical sciences integrate with domain sciences. The Center provides a clear framework that brings together an array of disciplines, working across existing departments, schools, and campuses to facilitate cutting-edge research and to prepare Tufts



graduates for a future in which data sciences are increasingly important. As a nexus, the Center also hosts various activities including forums, mini-symposia, and seminars.

TRAINING AND WORKSHOPS

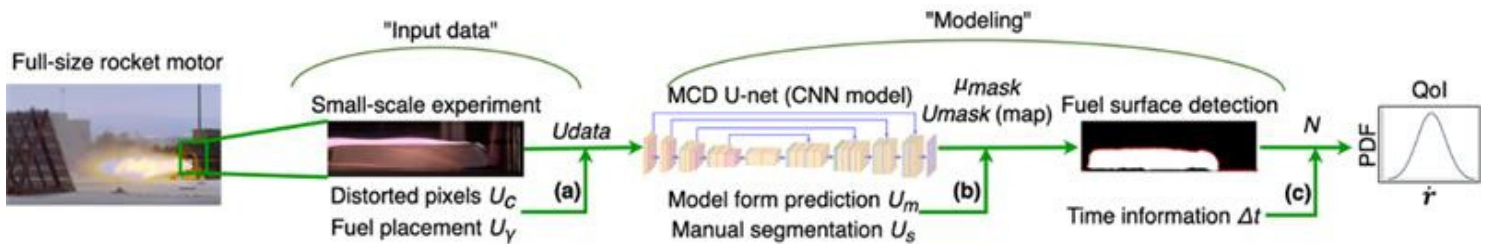
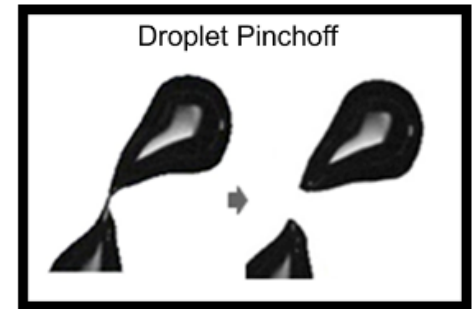
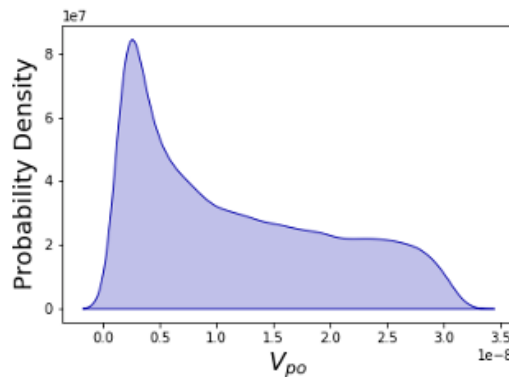
The Data Intensive Studies Center offers training workshops in data and computing sciences with contributors from several academic units including Tufts Technology Services, Tufts Clinical and Translational Science Institute, and the Tufts Data Lab. Short, 3-hour workshops and multi-day, 15-hour workshops have been offered on topics such as Bayesian Methods, Bioinformatics, Data Visualization, and Introductory Python Programming. Workshops are open to all students, faculty and staff.

DISCIPLINARY PARTNERSHIPS

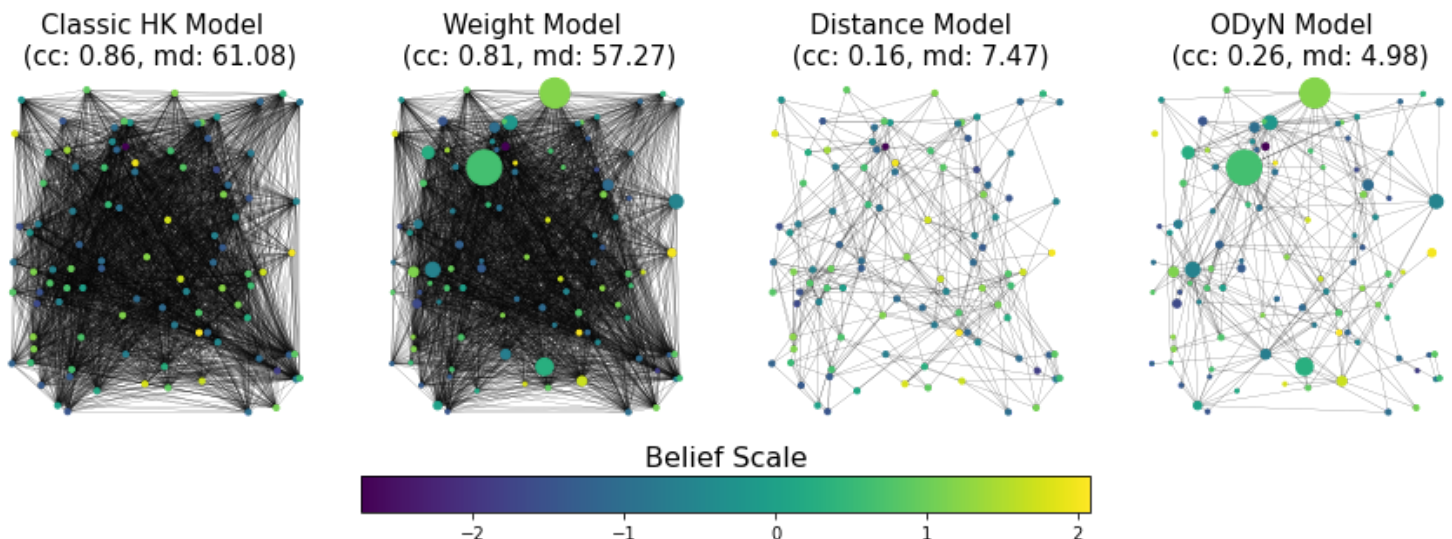
Data sciences can enable transformative research in many disciplines. However, initiating such work can be difficult and needs partners and expertise that may be difficult to find. The Data Intensive Studies Center helps Tufts researchers overcome these barriers. We seek to accelerate well-defined X+Data Sciences efforts on campus that can target high-impact research and, in appropriate areas, large, sponsored research efforts (e.g. NSF TRIPODS Phase II, NIH BIG Data to Knowledge, AI Institutes). DISC will support such efforts with a seed grant of up to \$20,000 and access to data scientists, data sets and other expertise at DISC. Through these projects, DISC engages faculty, staff, and students in trans-disciplinary research.

PIONEERING RESEARCH

SURROGATE MODELING OF THE DROPLET PINCH-OFF VOLUME FOR GAS/LIQUID INTERFACE IN COMBUSTION CHAMBERS



A framework for combining and propagating data and model form uncertainties to estimate the distribution of fuel regression rate from hybrid rocket experiments (Georgalis, Patra (Tufts) with DesJardin group (UB))





UNIVERSITY OF AMSTERDAM

Data Science Centre

SUMMARY

The University of Amsterdam Data Science Centre's mission is to enhance the university's research by developing, sharing and applying data science methods and technologies. As a coordinating hub within the UvA Library, the Centre is uniquely positioned to facilitate knowledge exchange as well as training in data-driven research.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

DEGREES, PROGRAMS, AND SPECIALIZATIONS

The Data Science Centre supports and co-finance a range of initiatives aimed towards accelerating data-driven research, including the:

- Accelerate Program
- Interdisciplinary PhD Program
- Fellowship Program

PROGRAM STATISTICS

- Affiliated Faculty & Staff: 50+
- Co-financed hiring of 25 FTE data scientists, engineers, and researchers via its programs

LOCATION

UvA University Library
Singel 425, 1012 WP
Amsterdam, The Netherlands

ABOUT US

The UvA's Data Science Centre is focused on accelerating data-driven research across the university's entire research landscape. To do so, the Centre is embedding data scientists and engineers throughout the university directly in research groups.



These affiliated data scientists and engineers share knowledge and experience through weekly sessions at the library - the intellectual crossroads of the university. By 2025, the Centre will be home to 35 data scientists working across every faculty.

DATA SCIENCE ACADEMY

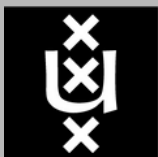
Continuing to develop at an academic level and boost your career at the same time? UvA Academy makes the most recent insights from science and practice accessible to professionals. Our short-term courses, masterclasses, and webinars help you deal with issues of today and tomorrow.

Classes and webinar topics include:

- Analytics Translator
- Artificial Intelligence for Managers
- Applied Blockchain
- Fintech: Blockchain, Cryptocurrencies and Smart Contracts
- Machine Learning and Artificial Intelligence in Finance
- Introduction to Quantum Computing

See the full list of topics at:
tinyurl.com/46px2tvd





SOCIAL

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web: dsc.uva.nl

twitter: [@uva_dsc](https://twitter.com/uva_dsc)

GRADUATE RESEARCH OPPORTUNITIES

The University of Amsterdam has a strong foundation of cutting-edge research in artificial intelligence and data science. Building on this foundation, the DSC supports 7 PhD positions that are performing research into new data science methods that help to tackle challenging problems in a given domain.

The 7 positions include all seven faculties. Examples of the projects include:

- The GPU Dentist: Instilling Domain Knowledge in Deep Networks through Hyperbolic Geometry
- Building Better Vision Models Using Pre-Cortical Inductive Biases
- Natural Language Processing and Responsible Data Management for Mental Health Research



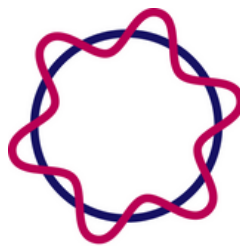
Learn more at tinyurl.com/ycknwtfn

PROUD PARTNER OF THE AMSTERDAM DATA SCIENCE NETWORK

The University of Amsterdam Data Science Centre is proud to be a partner of the Amsterdam Data Science Network, an organization that brings together industry and academia to help facilitate the city's ecosystem. This includes the four large knowledge institutions in Amsterdam and 20 other partners; its meetup network has over 8,000 members. Amsterdam Data Science also organizes thesis fairs introducing students to institutions and companies where they can do their master's thesis. Learn more at amsterdamdatascience.nl



Growing your career in Data Science?



ADSA Career Development Network

» Check out the

ADSA's Career Development Network (CDN) is a community of data practitioners advancing best practices in the dynamic field of data science.

The CDN cultivates meaningful connections between early- and mid-career data scientists by providing an inclusive space where members can engage in peer-to-peer learning through the sharing of experiences, resources, and expertise.

CONNECTING

Building an interdisciplinary community of collaborative students, researchers, and educators through virtual and in-person meetings

MENTORING

Cultivating mentoring relationships between members to support career development

SHARING

Promoting knowledge and skill sharing so members stay up-to-date with new developments in methods, tools, software, and pedagogy

FUNDING

Assembling interdisciplinary teams of members to jointly pursue competitive funding for collaborative research, and connect existing research teams to available funding opportunities



Interested in becoming a CDN member?

Learn more:

tinyurl.com/career-development-network



Data Science Institute

SUMMARY

The University of Arizona is a globally recognized research leader. The Data Science Institute enables research collaborations between faculty, specialists, and students and expands the base for experiential learning and research innovations. Data Sciences Academy provides academic programming and K-12 Teacher Development for early exposure to data science concepts and skills. The Institute for Computation and Data-Enabled Insight complements these activities through coordinated approaches and focus on workforce development.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

The University of Arizona offers multiple undergraduate and graduate degree programs including:

- Statistics & Data Science Undergraduate Degree
- Computer Science Undergraduate Degree
- Information Science Undergraduate Degree
- Management Information Systems Undergraduate Degree
- Systems and Industrial Engineering Undergraduate Degree
- Population Health Data Science Minor
- And more

PROGRAM STATISTICS

- Number of technical staff: 14
- Affiliated Faculty: 86

LOCATION

1230 N. Cherry Avenue
Tucson, AZ 85721

DATA SCIENCE INSTITUTE

The Data Science Institute facilitates collaboration across an increasingly diverse and active Data Science community by providing workforce development, essential technological assistance, and training to University partners. Formerly Data7, the Data Science Institute (DSI) aims to foster the next generation of data-driven research by encouraging university-wide interdisciplinary collaboration, gaining external visibility, developing industry alliances, and increasing funding for UA research. By connecting UA researchers and aligning institutional expertise, computational resources, and infrastructure, DSI enables investigators to ask more complex questions and achieve outcomes not easily attainable as individual investigators or within purely disciplinary teams. DSI provides initial support to University of Arizona research projects by funding part-time graduate students, postdoctoral fellows, technical staff, and computational infrastructure – all working to start new collaborations or broaden existing ones.

DATA SCIENCES ACADEMY

Undergraduate students can find a spectrum of opportunities for the Data Sciences at the University of Arizona, where they can choose Data Science as either a major or minor. The Data Sciences Academy initiative funds personnel and operations to support a university-wide endeavor to coordinate and lead in all areas of the data sciences and all aspects of university research, education and outreach.

INSTITUTE FOR COMPUTATION AND DATA-ENABLED INSIGHT

ICDI is designed to accelerate breakthrough discoveries by University of Arizona faculty, staff and students by cultivating trustworthy information capabilities and interdisciplinary collaboration. The Institute has three focus areas: 1) developing sustainable information tools and platforms that integrate social considerations from the outset; 2) creating a skilled workforce; and 3) providing campus-wide access to data and computation infrastructure. Within these areas, ICDI has several goals: to bring focus and capacity to unbiased scale computing, artificial intelligence, and machine learning; to convene networks of experts from different disciplines to tackle grand challenges; to deliver a collaborative, agile ecosystem for research computing and data management at scale; to recruit the best next-generation faculty; to train researchers through micro-courses, certifications, and other programs; and to provide workforce development opportunities. Visit datainsight.arizona.edu to learn more.

CYVERSE - THE OPEN SCIENCE WORKSPACE FOR COLLABORATIVE DATA-DRIVEN DISCOVERY

CyVerse strives to create an innovative, comprehensive, generic, and foundational cyberinfrastructure in support of life science research. CyVerse develops cyberinfrastructure that uniquely enables scientists across the diverse fields that comprise life sciences to address Grand Challenge questions in new ways, to stimulate and facilitate cross-disciplinary research, to promote biology and computer science research interactions, and to train the next generation of scientists on the use of cyberinfrastructure in research and education.

SOCIAL

email: rii-datascienceinstitute@arizona.edu

web: datascience.arizona.edu

SUMMARY

The Berkeley Institute for Data Science (BIDS) facilitates innovative data-intensive research and open source software development across an increasingly diverse data science community of domain and methodological experts from the University of California, Berkeley and beyond.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

BIDS offers Interdisciplinary Research; Open Source Research Software; and Data Science Training Programs, including the BIDS Cross Domain Initiatives (XDs), research fellowships and internships, cross-disciplinary discussion groups, public lectures, and training seminars/webinars.

PROGAM STATISTICS

Number of staff: 10

Number of affiliates: 70

LOCATION

University of California
Berkeley, California

BIDS IS A CENTRAL HUB OF DATA-INTENSIVE RESEARCH, OPEN SOURCE RESEARCH SOFTWARE, AND DATA SCIENCE TRAINING AT UC BERKELEY

BIDS' programs and initiatives are designed to facilitate collaboration across an increasingly diverse and active data science community of domain experts – from the life, social, and physical sciences, and the humanities – as well as methodological experts from computer science, statistics, and applied mathematics. Since its launch in 2013, BIDS has cultivated an environment of open inquiry and discovery for data-intensive research, and we continue to seek new and creative ways to cross traditional academic boundaries and engage a diverse community of researchers representing a wide array of disciplines.

INTERDISCIPLINARY RESEARCH

BIDS supports innovative cross-disciplinary research for faculty, staff, postdoctoral fellows, and graduate and undergraduate students in a variety of fields across the life, health, social, and physical sciences, the humanities, and in computer science, statistics, and applied mathematics.



OPEN SOURCE RESEARCH SOFTWARE

BIDS contributes to open source, open science, and open data resource communities in support of academic research.





SOCIAL

email: bids@berkeley.edu
web: bids.berkeley.edu
twitter: @UCBIDS
facebook: @UCBIDS
youtube: youtube.com/UCBIDS

DATA SCIENCE TRAINING PROGRAMS

BIDS' data science training programs facilitate innovative collaboration across all research disciplines, providing a variety of opportunities for researchers at all levels, including the following:

BIDS Cross-Domain Initiatives (XDs) are cross-disciplinary research communities working together to identify common principles, algorithms and tools to advance research; to break down boundaries between domains; and to facilitate new collaborations among like-minded researchers.

BIDS Fellowship and Internship Programs provide opportunities to cross interdisciplinary boundaries in a range of research fields across all domain areas. The **BIDS Data Science Fellowship** is a 2-year research training program open to postdocs and graduate students who are dedicated to advancing data science and undertaking innovative, cross-disciplinary, data-intensive research.



The **Berkeley Computational Social Science Training Program** recruits predoctoral students representing a variety of degree programs and expertise areas in the social sciences, including demography, public health, public policy, epidemiology, social welfare, and sociology. Participating fellows develop advanced computational and data science analytics skills to address urgent needs in biomedical, behavioral, social and clinical research. The **Innovate For Health** initiative is a collaboration between BIDS at UC Berkeley, the Bakar Computational Health Sciences Institute at UCSF, and Janssen Research & Development, who together launched the **Data Science Health Innovation Fellowships** to recruit data scientists for high-impact, data-driven healthcare research. This program provides 2 years of financial support to develop and execute health-related translational research that optimizes data-driven discovery and addresses currently unmet patient needs.

EDUCATION AND OUTREACH

BIDS' education and outreach programming endeavors to engage a wide variety of audiences with events ranging from discussion groups and workshops to training seminars, webinars, and public lecture series. BIDS has created and actively maintains a reputation of open engagement, which has been an integral factor in fostering collaboration and data science engagement with research.





Academic
Data Science
Alliance

BERKELEY

Institute for
Data Science

IMAGEXD

Image Analysis **Across** Domains

In March 2023, ADSA co-hosted the sixth annual ImageXD workshop with UC Berkeley's Institute for Data Science (BIDS).

This cross-domain event brought together scientists, researchers, and theorists from a wide variety of disciplines. The workshop included experts in ecological monitoring, sustainable agriculture, biomedical imaging, aerospace engineering, and machine learning, just to name a few. The commonality among the ~40 participants was that all of them work with **images as a primary source of data**.

The unique unconference format of XDs provides attendees the opportunity to build collaborations and learn from one another, featuring informal sessions driven by the attendees' research interests and goals.



Check out this blog post for a full recap:
tinyurl.com/ImageXD-recap

We want to hear from you!

If you are interested in participating in or organizing a future ImageXD workshop, let us know!

There are also opportunities to partner with us on organizing an XD event for a different data type.



Contact us at
info@AcademicDataScience.org



Learn More at ImageXD.org

SUMMARY

As the only computational-focused school in the UC System, the UC Irvine Donald Bren School of Information and Computer Sciences has a unique perspective on the information technology disciplines that allows us a broad foundation from which to build educational programs and research initiatives.

ORGANIZATIONAL STRUCTURE

The Data Science program is offered by the Department of Statistics and the Department of Computer Science within the UCI Donald Bren School of Information and Computer Sciences.

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Master of Data Science
- B.S. in Data Science

PROGRAM STATISTICS

- Number of faculty: Split among departments
- Number of core staff: 4
- Number of affiliates: 50
- Number of students: 46

SOCIAL

email: mds@ics.uci.edu

web: mds.ics.uci.edu

LOCATION

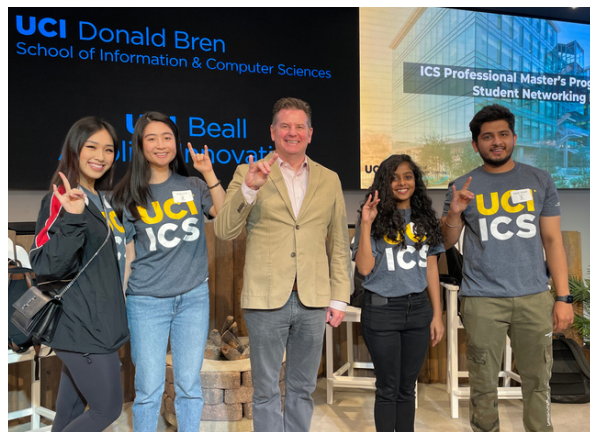
University of California, Irvine
6210 Donald Bren Hall
Irvine, CA 92697-3425



PROGRAM OVERVIEW

The Donald Bren's School of Information and Computer Science Master of Data Science (MDS) prepares you to develop your understanding of the cornerstones of modern data science through a dual framework in Statistics and Computer Science. It was ranked #7 Best Master's in Data Science by Fortune in 2022.

The MDS program offers two pathways (Part-Time and Full-Time) taught by pioneering faculty and researchers in the field of data science, anchoring the curriculum in hands-on training in applied probability and mathematical statistics, statistical modeling and computing, machine learning, data management and visualization, and artificial intelligence.



"Industry is learning quickly that people can scrape and analyze data, but to do something truly meaningful with data - to make decisions that will drive the industry forward you need the foundations of data science and understanding the statistics and computing methods. "

*-Dan Gillen, Ph.D.
Chair of Department of
Statistics*

The MDS program provides an immersive education and experiential learning. Your time at the ICS School is focused on developing your skills and gaining exposure to the foundations of data science.

Between our Orange County corporate and tech connections and our combined faculty experience, the ICS School's global network is prominent. A large number of our alumni stay in Southern California, and our vast network spans across the world. No matter where your education takes you, the connections you make here will positively impact your life and career. We focus on the quality of professional and academic relationships that you build while here.

UC San Diego

HALICIOĞLU DATA SCIENCE INSTITUTE

SUMMARY

Founded in 2018 as an independent academic unit, the mission of the Halicioğlu Data Science Institute (HDSI) is to establish the scientific foundations of data science, develop new methods and infrastructure, and train students and partners to use data science to solve the world's most pressing problems.

ORGANIZATIONAL STRUCTURE

Cross-Departmental Institute; and Department of Data Science

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Ph.D. in Data Science
- M.S. in Data Science
- M.S. in Data Science (Online)
- B.S. in Data Science
- Undergraduate Minor in Data Science

PROGRAM STATISTICS

- Core faculty: 51
- Core staff: 27
- Affiliated faculty: 187
- Number of students:
 - Undergraduate
 - Major: 920
 - Minor: 225
 - Graduate
 - Ph.D: 17
 - MS/MDS online: 92

LOCATION

10100 Hopkins Drive
La Jolla, CA 92093

TALENT PREPARATION IN DATA SCIENCE THROUGH EXPERIENTIAL LEARNING

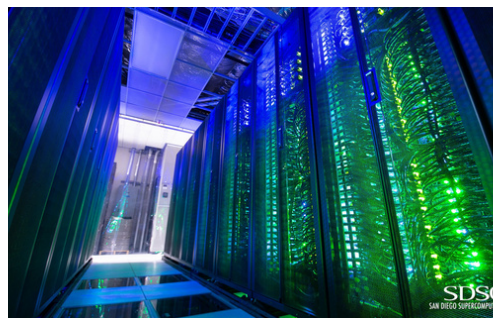
HDSI's Data Science major preparation is designed to be transdisciplinary by providing a hub of instructional activities that draws faculty and researchers from different disciplines and departments. The program couples rigorous training in the theoretical foundations of data science with ample opportunities for experiential learning. It is enriched with real-world applications by partnering with industry and community organizations that provide access to rich data sets and varied use cases of societal importance while also increasing community engagement and facilitating multiple career pathways.

Experiential learning starts early with an Undergraduate Research Scholarship program and culminates in a senior capstone project designed to showcase mastery across the wide range of mathematical/statistical, technical, and conceptual skills developed throughout the curriculum. The capstone spans the entire data science lifecycle, including assessment of the problem, acquisition of domain knowledge, collection and cleaning of the data, system design, model creation and analysis, discussion of ethical implications, and presentation of results.



PARTNERING WITH THE SAN DIEGO SUPERCOMPUTER CENTER (SDSC) TO INCREASE UNDERSTANDING AND CAPACITY FOR SCALE AND COMPLEXITY

Founded as one of the original NSF Supercomputer Centers in 1985, SDSC remains at the forefront of high-performance computing. It provides the research community with large-scale computer and data resources, research networking, software, and computational and data science expertise.



Today, SDSC's efforts are aimed at bringing together the power of machine learning, artificial intelligence, and data analysis. With simulation and large-scale experiments, SDSC supports the multidisciplinary approach needed to address critical research and societal challenges, from astrophysics and Earth sciences to disease research and drug discovery. SDSC translates this innovation into practice through its collaborative partnerships across academia, industry, and the public sector.

HDSI and SDSC partner on programs for convergence research and translating data science innovations into practice.

SOCIAL

email: datascience@ucsd.edu

web: datascience.ucsd.edu

twitter: @HDSIUUCSD

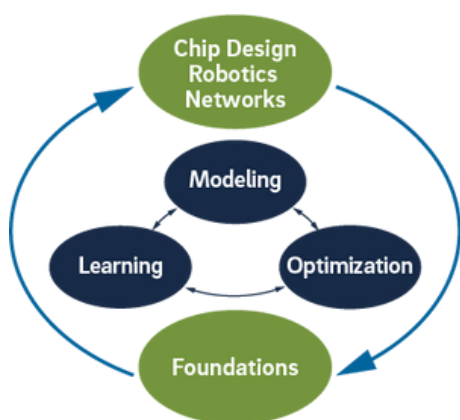
linkedin: www.linkedin.com/school/hdsiucsd

facebook: www.facebook.com/HDSIUUCSD

CATALYZING LARGE SCALE INTEGRATIVE RESEARCH PROJECTS

HDSI provides intellectual and operational support that allows researchers from various disciplines to work together in creating new research initiatives with potential for long-term impact. Among these efforts are the recently announced AI Institute, TILOS (The Institute for Learning Optimization at Scale), as well as DARPA efforts on Smart Radio platforms.

TILOS is a National Science Foundation-funded National Artificial Intelligence (AI) Research Institute. The TILOS mission is to make impossible optimizations possible, at scale and in practice.



TILOS is a partnership of faculty from the University of California, San Diego; Massachusetts Institute of Technology; National University; the University of Pennsylvania; the University of Texas at Austin; and Yale University. TILOS will pioneer learning-enabled optimizations that transform chip design, robotics, communication networks, and other use domains that are vital to our nation's health, prosperity and welfare.

Foundational Research will pursue five main pillars:

1. Bridging discrete and continuous optimization
2. Distributed, parallel, and federated optimization
3. Optimization on manifolds
4. Dynamic decisions under uncertainty
5. Non-convex optimization in deep learning

CREATING LEADERS IN DATA SCIENCE THROUGH GRADUATE STUDY

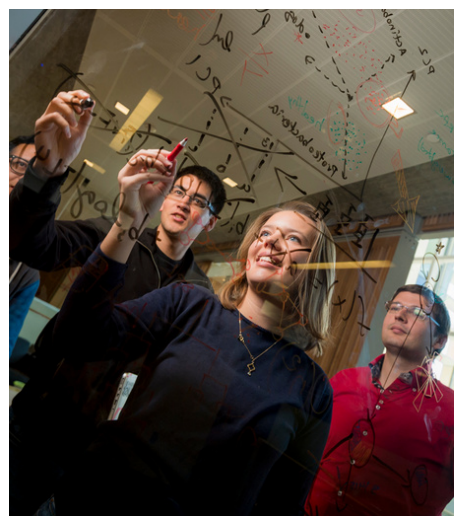
Three graduate programs launched in Fall 2022 joining the Halicioğlu Data Science Institute's popular undergraduate Data Science programs for an integrated slate of courses and degree programs at all educational levels:

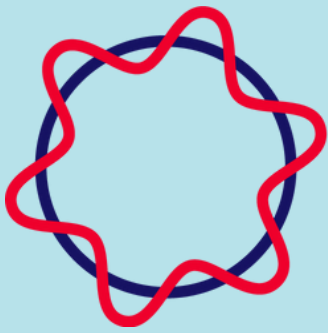
Master of Science: the MS program features courses in the foundational areas that prepare students from diverse backgrounds for a successful career in Data Science. A thesis option exists for students interested in cutting-edge research.

Online Masters: the MDS program is designed for working professionals and combines concepts from statistics, computer science, and applications. The fully-online program is offered asynchronously in order to accommodate students with varying work schedules.

Doctor of Philosophy: the doctoral program creates leaders in the field of data science who will challenge and expand the boundaries of knowledge in the field. The doctoral program provides a research-oriented education spanning diverse data science areas such as algorithms, machine learning, artificial intelligence, optimization, statistical methods, and data ethics.

HDSI continues to develop innovative programs with other Departments, Schools, and Institutes.





ADSA Student Chapters



ADSA Student Chapters provide a unique opportunity for networking, mentoring, and bonding with students, leaders, and practitioners who share your passion for data science.

CONNECT

Meet and collaborate with peers who share your passion for data science at your college or university

LEARN

Gain new skills through hands-on workshops, events, and projects both online and in-person

GROW

Advance your skills, career, and network by leveraging your knowledge to build solutions for local problems

Join a global network and help shape the next generation of data scientists...

Start a Student Chapter at your school!

ALL ADSA STUDENT CHAPTERS MUST MEET THE FOLLOWING REQUIREMENTS:

1. Elect a student who can commit to **two consecutive semesters** to serve as Chapter President
2. Have one **faculty or staff member** who will sponsor the chapter
3. **Submit a constitution** that provides guidelines to members who join the ADSA student chapter

There are no scholastic requirements and students are not required to be data science majors. All students are welcome and encouraged to get involved!

Fill out the form to get started!

<https://tinyurl.com/student-chapter-application>



Interested in starting an ADSA Student Chapter?

Learn more:
tinyurl.com/student-chapters



THE UNIVERSITY OF CHICAGO

CENTER FOR TRANSLATIONAL DATA SCIENCE

SUMMARY

The Center for Translational Data Science at the University of Chicago is developing the discipline of data science and its applications to problems in biology, medicine, healthcare and the environment. We develop and operate large-scale data platforms to support research in topics of societal interest including cancer, cardiovascular disease, inflammatory bowel disease (IBD), birth defects, veterans' health, pain management, opioid use disorder, and environmental science. We also develop new machine learning and AI algorithms over the data in our platforms.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

DEGREES, PROGRAMS, AND SPECIALIZATIONS

Specializations in translational data science and its applications to biology, medicine, healthcare, and the environment.

PROGRAM STATISTICS

- Number of Faculty: 3
- Number of Staff: > 75 research scientists and professional staff
- Affiliated Faculty: 26

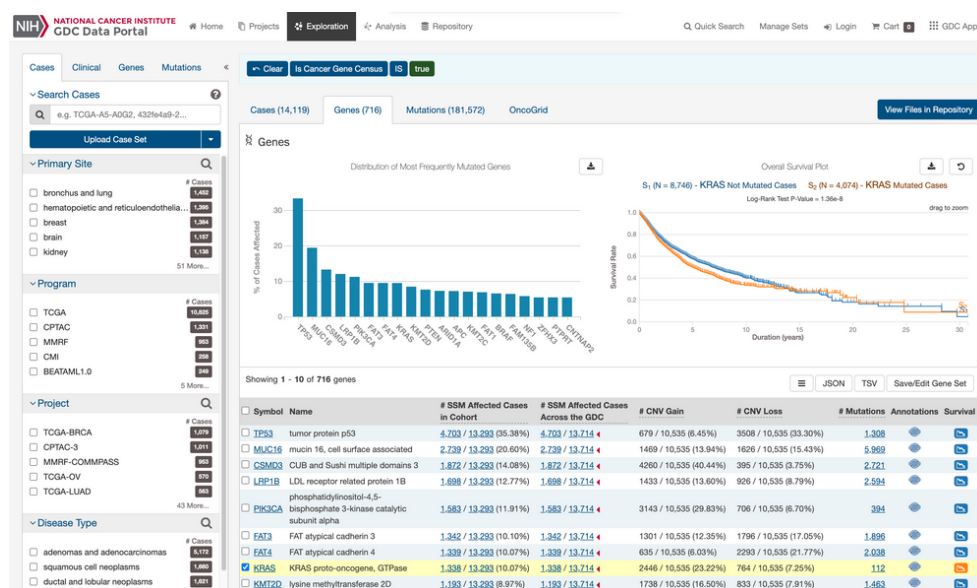
LOCATION

University of Chicago
5454 South Shore Drive
Suite 2A/B
Chicago Illinois 60615

PROGRAM OVERVIEW

Our center has been at the forefront of data sharing by continuously leveraging new approaches and new technology to enable world-class science in a variety of fields. We have developed a number of important firsts, including one of the first large-scale data clouds (NSF-supported Open Science Data Cloud (2010-2016)), the first data cloud designed to host biomedical data and approved as a NIH Trusted Partner (Bionimbus Protected Data Cloud (2013-present)), the first large-scale data commons (National Cancer Institute's Genomic Data Commons (2016-present)), and the first set of services to create data ecosystems or meshes for biomedical data (Data Commons Frameworks Services for the Cancer Research Data Commons (2020-present)).

Today with our partners, we operate a data ecosystem comprising over 20 data commons that make over 17 PB of data available to the research community from nearly 1.7M patients. We provide access to this data via secure and compliant workspaces while protecting patient privacy. These are all based on the open-source Gen3 Data Platform, which includes data commons, framework services, and workspaces.



The NCI Genomic Data Commons, which was developed by CTDS

SOCIAL

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twitter: @UChicagoCTDS

linkedin: Center for Translational Data Science

facebook: www.facebook.com/UChicagoCTDS

youtube: @uchicagoctds4255



UNIVERSITY OF DELAWARE

DATA SCIENCE INSTITUTE

SUMMARY

The Institute aims to accelerate research in data science, serving as a nucleating effort to catalyze interdisciplinary research collaborations across fields impacting our society.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- MS in Data Science
- PhD/MS/Certificate in Bioinformatics Data Science
- MBA Major in Business Analytics
- PhD in Educational Statistics and Research Methods
- PhD in Financial Services Analytics (FSAN)
- PhD/MS/Certificate Geospatial Data Science
- PhD in Interdisciplinary Neuroscience
- And much more

PROGRAM STATISTICS

- Number of faculty: 140
- Number of staff: 13
- Number of Students: 162

LOCATION

590 Avenue 1743, Suite 147
Newark, DE 19713

INSTITUTE OVERVIEW

The University of Delaware's **Data Science Institute (DSI)** serves as a hub for **interdisciplinary research, collaboration, and excellence**, bringing together faculty and students from eight colleges across campus to work effectively with **big data** and address problems and opportunities facing society—from health sciences, physical sciences, engineering, and environmental sciences to behavioral and social sciences and public policy.

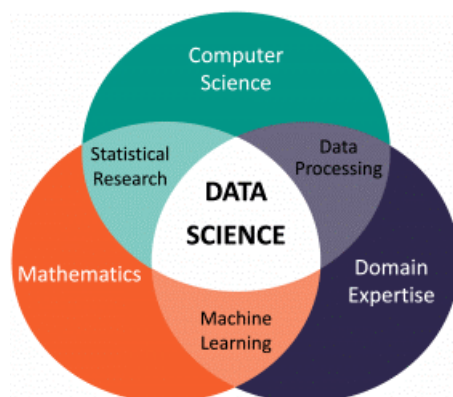
INSTITUTE PURPOSE AND DESIGN

DSI aims to accelerate collaborative research in, and application of, data science. The DSI operates through four working groups (WGs): **Research WG** to foster multidisciplinary collaborations and joint grants, **Infrastructure WG** to provide data and compute infrastructure, **Training WG** to facilitate training and development opportunities, and **Networking & External Relations WG** to host events and connect faculty, students, and industry and government partners.

DSI facilitates student training and education through support from federally funded training grants including **NSF HDR DSC**: Delaware and Mid-Atlantic Data Science Corps, **NSF NRT-HDR**: Computing and Data Science Training for Materials Innovation, Discovery, Analytics, and **NIH T32**: Graduate Training program in Computational Biology, Bioinformatics & Biomedical Data Science (CBB).

OUR FACULTY

DSI brings together more than 100 faculty from all eight colleges and schools across campus to work collaboratively in a wide range of topics in foundations and applications of data science. DSI faculty at UD combine expertise in statistics, computer science, mathematics, information sciences and numerous related fields.



11 Resident Faculty across the colleges were hired as a Presidential Strategic Initiative to complement the **100+ DSI Affiliated Faculty**. Resident Faculty lead the Certificate in Urban Data Science, PhD in Educational Statistics and Research Methods, and the NSF-funded Delaware and Mid-Atlantic Data Science Corps.



SOCIAL

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web: dsi.udel.edu

twitter: @dsiudel

DATA SCIENCE TRAINING AND EDUCATION

The interdisciplinary data science programs are offered through 12 graduate, undergraduate, and certificate programs including **>70 data science-related courses**.

With a flexible set of core and elective courses, the data science degrees lead to a wide range of potential application areas. By providing a solid background in the methods behind data science, the programs enable our graduates to work well with data and be better prepared for the latest methods of focusing on large or dynamic data sets in their chosen fields.

Our degree programs and training grants are preparing students for an extensive variety of data science positions. Data analysts use mathematical, statistical, and modeling techniques to solve problems; data engineers design, build, and maintain an organization's data and analytical infrastructure; and data scientists create sophisticated analytical models to build datasets and derive new insights from data.

INDUSTRY ENGAGEMENT

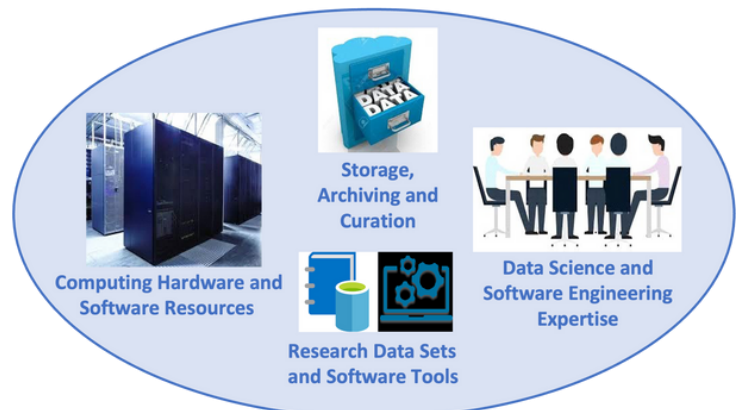
DSI is establishing an **Industry Affiliate Program** to broaden industry engagement. Leveraging expert faculty across the University and cutting-edge data science capabilities and unique resources, industrial partners can:

- Address industry-wide problems through collaborative research projects
- Demonstrate, test, and improve high-risk / high-return concepts in a protected environment
- Gain access to powerful computational resources and expertise
- Participate in and co-host special events, e.g., lectures, seminar series, workshops, trainings, hackathons
- Access resources for workforce development, including certificates, short courses, and degree programs

DATA-INTENSIVE & COMPUTATIONAL SCIENCE (DiCoS) CORE FACILITY

The **Data Intensive & Computational Science (DiCoS) Core** supports interdisciplinary research collaborations and team science. DiCoS aims to advance both the research frontiers and the underlying infrastructure at the nexus of computational and data science, enabled by high-performance computing and big data.

DiCoS develops and guides the use of shared resources, such as the **DARWIN High Performance Computing System**, and scientific expertise to support data science and computational research. DiCoS identifies the needs of the research and education community, providing infrastructure support for computational and storage resources, research data sets, and scientific expertise.





NCSA | National Center for Supercomputing Applications

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

SUMMARY

The National Center for Supercomputing Applications (NCSA) at the University of Illinois Urbana-Champaign is a campus-wide interdisciplinary center. Since 1986, we've been at the epicenter of supercomputing research, pioneering innovations in computing and data. Our advanced cyberinfrastructure and expertise provide a hub for transdisciplinary research for both academia and industry.

ORGANIZATIONAL STRUCTURE

We're a campus-level interdisciplinary research institute, reporting to the Office of the Vice Chancellor for Research and Innovation

PROGRAM STATISTICS

- Number of core professional staff: 240
- Affiliated researchers: 131

LOCATION

Urbana, Illinois USA

PROGRAM OVERVIEW

The National Center for Supercomputing Applications (NCSA) is one of 10 interdisciplinary campus institutes at the University of Illinois Urbana-Champaign. For more than 36 years, NCSA has been applying advanced computing to change the world. NCSA is currently home to multiple programs in data science, including our Center for AI Innovation, Advanced Visualization Laboratory, Center for Astrophysical Surveys, and Health Innovation Program Office. NCSA's Industry program offers data science expertise to the private sector. NCSA also hosts programs that provide opportunities and training for students in data science, an



REU site, and DIGI-Mat, a National Science Foundation Research Traineeship program in cooperation with the department of materials science. NCSA also hosts the Midwest Big Data Innovation Hub (MBDH), one of four NSF regional big data hubs.

The focus of NCSA has always been on applications, and today many applications build on combining data and computing. NCSA also operates powerful supercomputers, including the newly installed Delta, optimized for machine learning as well as modeling and simulations. NCSA is developing a Center-wide data science community that leverages skills, resources, and services across its projects and units.

MIDWEST BIG DATA INNOVATION HUB

The MBDH is based at NCSA and connects the campus to communities across the region by convening and coordinating data science activities in:

- Advanced Materials and Manufacturing – building capacity by developing effective pathways to incorporate data into the materials and manufacturing space, such as integrating existing materials and manufacturing-related software and services
- Digital Agriculture – making the data that describe ecosystems, crops, and animals more easily findable, accessible, interoperable, and reusable (FAIR) to improve the agriculture process and its goods
- Smart & Resilient Communities – shaping conversations on equitable data use, innovative research, and community-driven, data-informed planning and decision-making to address the challenges of using infrastructure, safety and security, and coexistence of diverse communities

I ILLINOIS

NCSA | National Center for
Supercomputing Applications

SOCIAL

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linkedin: National Center for Supercomputing Applications

facebook: @NCSAatIllinois

instagram: @NCSAatIllinois

youtube: NCSAatIllinois

- Water Quality – building and convening an innovation network to accelerate and sustain the development of standards, data sets, and cyberinformatics tools to address critically missing links and bottlenecks in water-resources research and development
- Big Data in Health – developing infrastructure enabling powerful and secure mechanisms for data aggregation and open sharing to manage, harmonize, aggregate, model, interrogate and visualize complex biomedical and health data

CENTER FOR ARTIFICIAL INTELLIGENCE INNOVATION

NCSA's Center for Artificial Intelligence Innovation leverages existing partnerships and forges new collaborations to solve difficult multidisciplinary challenges and expand awareness of what AI can achieve. Maximizing synergies between industry teams, students, computing experts, and researchers enables powerful, adaptive, lasting solutions to intractable problems. The Center's projects include helping researchers maximize the potential of AI in high energy physics and multi-messenger astronomy, medical imaging, and business. The Center operates the REU program and offers tools and training to the campus AI community.

CENTER FOR ASTROPHYSICAL SURVEYS

A collaborative effort between NCSA, the university's Office of the Vice Chancellor for Research and Innovation, department of astronomy, and department of physics, CAPS projects include supporting the Dark Energy Survey helping researchers explore the accelerating expansion of the universe; the Vera C. Rubin Observatory working to discover the structure and evolution of the universe; and support of the South Pole Telescope and others around the world.

HUMANITIES RESEARCH INSTITUTE AND THE HATHITRUST RESEARCH CENTER

The Humanities Research Institute promotes study in the humanities, arts, and social sciences and the HathiTrust Research Center enables computational analysis of works in the 17.5M-volume HathiTrust Digital Library to facilitate non-profit research and educational uses of the collection.

ACADEMIC PROGRAMS

The initiatives above exemplify the interdisciplinary approach taken at the University of Illinois Urbana-Champaign to advance data science. For students, this means that there is an abundance of opportunities to engage with data-driven solutions within their chosen degree program. This cross-campus approach is mirrored in a set of innovative "CS+X" degree programs where students take courses in both computer science and X, where X ranges from mathematics to music. A new series of programs labeled "X+DS" take a similar form and provide future data science professionals with first-hand experience in real use cases. There are many other programs on campus, for example the department of computer science offers an online Master of Science in Data Science; the department of civil and environmental engineering offers an MS with a data science track; statistics offers a Certificate in Data Science; engineering offers a data science and engineering concentration at the doctoral level, and the college of liberal arts & sciences offers a data science scholars program. The School of Information Sciences (iSchool), which considers the sociotechnical context in which data is produced and consumed, also offers a data science and analytics professional pathway in the Master of Science in Information Management. The iSchool is the administrative home for a campus-wide Master of Science in Bioinformatics, an undergraduate Minor in Informatics, and a PhD in Informatics. Focusing on industry, the Gies College of Business offers a Master of Science in Business Analytics, and an Accounting Data Analytics Graduate Certificate. Lastly, the Carle Illinois College of Medicine (the world's first engineering-based College of Medicine) immerses students in the use of data to improve patient care and outcomes along with core clinical knowledge.





UNIVERSITY OF MARYLAND,
BALTIMORE COUNTY

DEPARTMENT OF INFORMATION SYSTEMS

SUMMARY

UMBC is a dynamic, R1, public research university integrating teaching, research and service to benefit the citizens of Maryland and the world. Our UMBC community redefines excellence in higher education through an inclusive culture that connects innovative teaching and learning, research across disciplines, and civic engagement.

ORGANIZATIONAL STRUCTURE

The Department of Information Systems is housed within the College of Engineering and Information Technology

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- MS in Information Systems (online and on campus)
- BS in Information Systems
- BA in Business Technology Administration
- Undergraduate Certificates:
 - Business Analytics
 - Cybersecurity Informatics
 - Decision Making Support

PROGRAM STATISTICS

- Number of faculty: 39
- Number of core staff: 5
- Number of students: 1800+ enrolled in our graduate and undergraduate programs

LOCATION

1000 Hilltop Circle ITE 404
Baltimore, MD 21250

PROGRAM OVERVIEW

The Department of Information Systems is part of The College of Engineering and Information Technology (COEIT) at UMBC. We currently offer a variety of degrees and certificates for undergraduate and graduate students, including a U.S. News-ranked Online M.S. in Information Systems and specializations in data science.

Through our curriculum, Information Systems students investigate societal impact, keeping humans in the loop and dealing with real and imminent challenges facing society. With the help of our faculty members, students study, design, develop, and evaluate information technologies to address the needs of a broad range of individuals and organizations.



DATA SCIENCE SPECIALIZATIONS

Businesses and governments around the world are using big data to make big decisions, which is why we have integrated data science throughout our programs, including specialized track offerings. Our Online and On-Campus Master of Science in Information Systems degrees both include tracks in Artificial Intelligence and Data Science. These tracks appear on a student's transcript and help give them an advantage when seeking employment or terminal degrees.

Our AI track includes courses like Deep Learning and Social Media Application and Analysis. It teaches students how to make machines find the data they want, derive meaningful information from it, and teach it to make decisions based on that data. Our Data Science track includes courses like Information Integration and Data Analytics in Cybersecurity. This track teaches students the fundamentals of data science and how to apply it in different contexts. These skills are vitally important in the 21st century, across all industries.



SOCIAL

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web: is.umbc.edu

twitter: @umbcinfosystems

facebook: @IsDepartmentAtUmbc

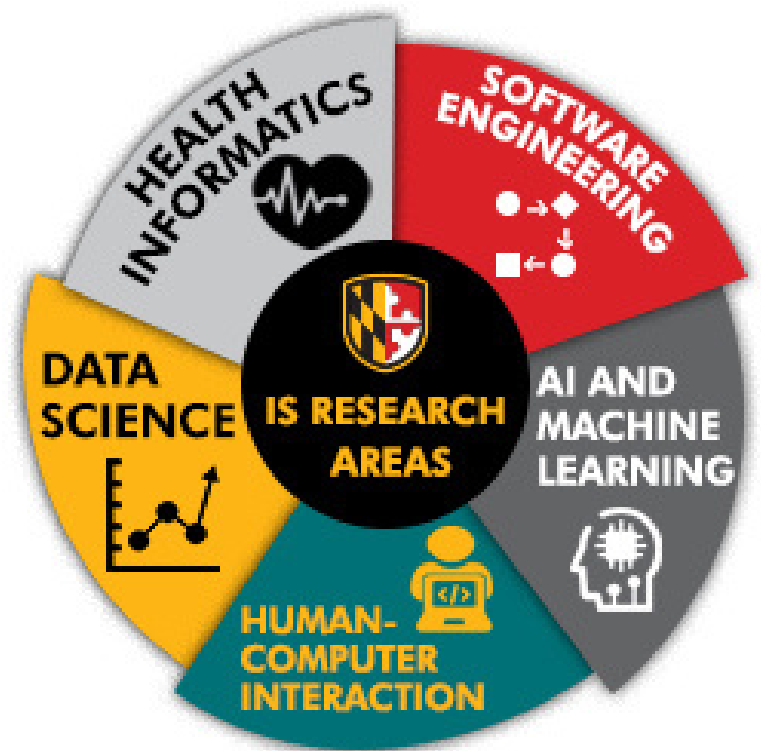
linkedin: UMBC Department of Information Systems

CUTTING-EDGE RESEARCH

UMBC is a top-tier, R1, public research university leading the world in inclusive excellence in research. Our research aims to further innovation in Information Systems through inclusive interdisciplinary partnerships and collaborations. We accomplish this by recruiting and retaining faculty with a passion for civically engaged research.

We are committed to mentoring students in research. Participating in research helps students develop their critical thinking, build transferable skills, and explore potential careers. The mentoring relationships built between students and faculty can last a lifetime and benefit both parties. We get students involved in research as early and often as possible.

Our main research areas in the IS department are AI and Machine Learning, Data Science, Health Informatics, Human-Computer Interaction, and Software Engineering. The IS Department is home to four innovative research centers; CARDS, CARTA, iHARP and ISRC, each dedicated to fostering interdisciplinary research and innovation, teaching and mentoring, and community-engaged scholarship and service across UMBC and beyond.



DATA SCIENCE MEETS CLIMATE SCIENCE

Tens of millions of people live in areas that are at risk for flooding due to climate change, sea level rise, and melting of glaciers. The Department of Information Systems, along with a team of researchers, are

using data science, machine learning, artificial intelligence (AI), and Arctic and Antarctic observations to analyze enormous volumes of climate data in ways that could help populations prepare for and respond to these risks. Their research is part of a new five-year, \$13 million grant from the National Science Foundation's Harnessing the Data Revolution (HDR) Big Idea program.



Center for Data Science

UNIVERSITY OF MASSACHUSETTS AMHERST

SUMMARY

The Center for Data Science fosters research, education, industry collaboration, and public service to make UMass Amherst a destination and partner-of-choice for research in data science. We help companies and organizations meet their growing demand for well-trained data scientists, promote economic development, and support working data scientists in Western Massachusetts.

ORGANIZATIONAL STRUCTURE

The Center for Data Science is housed within the Manning College of Information and Computer Sciences

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Masters Concentration in Data Science
- Certificate in Statistical and Computational Data Science

PROGRAM STATISTICS

- Number of faculty: 47
- Number of staff: 6
- Number of Students: approximately 345

LOCATION

740 North Pleasant Street
Suite A205
Amherst, MA 01003

DATA SCIENCE FOR THE COMMON GOOD

CDS is leading efforts to provide education and research pathways for aspiring data scientists to apply their knowledge and skills to benefit society. Data Science for the Common Good™ (DS4CG) is a summer program that trains aspiring data scientists to work on real-world problems that benefit the common good. Our teams of computer science Master's students collaborate with nonprofit organizations and government agencies working in public health, education, health and wellness, environmental conservation, and more. DS4CG harnesses growing student interest in social-good causes and connects it to partner organizations that stand to benefit from the students' growing data science expertise.

DS4CG serves organizations that lack staff capacity to exploit state-of-the-art analysis and modeling of their business data. Ideal DS4CG projects incorporate analysis and integration of very large volumes of data, with different types and formats. DS4CG fellows compile, organize and clean these datasets, mathematically explore their statistical properties, build predictive models and forecasts, and visualize the results. Project deliverables can include actionable data-driven insights, presentations, reports, and proof-of-concept software tools. Learn more [here](#).

DATA CORE

The Data Science and Software Engineering Core provides data science and related software engineering services in support of research and development. Services offered include analysis, application development, deployment, and prototyping in areas such as data science, security, forensics, software development, informatics, machine learning, computer vision, natural language processing, and cloud computing.

Building on the foundation of the world-class expertise of computer science faculty, we provide a deep and dedicated team of professional scientists and engineers that can be shared widely, to solve a range of research, application, and cross-disciplinary problems. We foster engagements at all levels from supporting basic research to solving applied problems, to implementing models, software, and solutions at scale.

Services are provided to the Manning College of Information and Computer Sciences, to the University as a whole, as well as to outside government, non-profit, and for-profit enterprises.

DATA SCIENCE INDUSTRY MENTORSHIP PROGRAM

The Data Science Industry Mentorship Program is an exclusive benefit of the Center for Data Science Industry Affiliates Program. The program matches small teams of data science Master's students with an industry-proposed project. Over the course of an academic semester each team works under the guidance of an industry mentor.

Program Objectives:

- Small teams of MS-level data science students at UMass Amherst get the opportunity to work on industry-relevant problems, with guidance and mentoring from industry data science professionals.
- Companies get the opportunity to make cost-effective progress on data science exploratory problems of interest, leveraging the effort of students who are in the midst of data science training. Company professionals “learn alongside” the student teams.
- As a result of the experience of working with these students, participating companies may find candidates for future internships and full-time roles.



Past runs of this course have resulted in publications at high-impact conferences, and some have received best papers awards. Learn more [here](#).

EQUITY, ACCOUNTABILITY, TRANSPARENCY, AND EXPLAINABILITY (EQUATE)

EQUATE is an acronym for Equity, Accountability, Transparency, and Explainability. These areas are commonly referred to as FAT (fairness, accountability, and transparency).

EQUATE is an interdisciplinary initiative of UMass Amherst faculty who are engaged in research and education related to equitable algorithms and systems. The initiative is supported by the Center for Data Science, and many of the EQUATE community members are drawn from CDS-affiliated faculty in the College of Information and Computer Sciences. The group's educational efforts include coursework in ethics and algorithm design that respects the values of fairness and transparency. Community research efforts explore EQUATE topics within software systems and programming languages, machine learning, and vision, theory, and data management systems. Learn more at tinyurl.com/4cnkx3b6



Michigan Institute for Data Science

UNIVERSITY OF MICHIGAN

SUMMARY

MIDAS strengthens University of Michigan's research capacity in Data Science and Artificial Intelligence, and enables their transformative use for scientific discovery and lasting societal impact. Its faculty community includes 470 methodologists and domain scientists from all schools and colleges at the Ann Arbor campus, and Dearborn and Flint campuses.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Graduate Data Science Certificate

PROGRAM STATISTICS

- Number of technical staff: 7
- Affiliated Faculty: 470
- Students currently enrolled in the certificate program: 80

LOCATION

500 Church Street, Suite 600
Ann Arbor, MI 48109-1042

RESPONSIBLE DATA SCIENCE AND AI

As data science and AI become a major force in science and in society, increasingly complex analytical pipelines working with poorly understood data pose significant issues of bias, inclusion and fairness, as well as the validity of research outcomes. MIDAS mobilizes researchers to promote responsible and reproducible data science and AI. Our focus areas include: Ethical data science: Building on a multi-university project which develops an automated system to detect and mitigate biases in data from



public and private sources, MIDAS collaborates with U-M researchers to incorporate data equity in various projects and grants. "Ethical data science and AI" is also a theme in our postdoc program and in our campus-wide research events. Promoting reproducible research: MIDAS has organized an annual Reproducibility Challenge, in which researchers submitted their approaches to improving the reproducibility of data-intensive research. Through these and related events, MIDAS has gathered like-minded researchers and built upon their work to develop a collection of resources for reproducible research. We will expand our work in this area to provide training and consultation to researchers.

AI IN SCIENCE AND ENGINEERING

In 2022, MIDAS established the Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship, a Program of Schmidt Futures. With this program and its sister program, the Michigan Data Science Fellows, we provide intensive training and research experience to outstanding early-career researchers who are on their way to be the next generation of research leaders. Moreover, with the Schmidt AI in Science at the core, we aim to enable the substantive use of AI for breakthroughs in science and engineering. This not only includes developing AI methods as components of data processing and analytics, but also using AI to design and monitor experiments, hence greatly accelerating and automating the research process. We are developing research and training activities to catalyze creative and transformative applications of AI that will lead to major scientific breakthroughs carried out by the Fellows and their mentors, and enable the University of Michigan research community to adopt AI in imaging, planning, executing supporting research applications across a range of science and engineering domains.



SOCIAL

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twitter: @um_midas

linkedin: Michigan Institute for Data Science (MIDAS)

ENABLING THE USE OF NOVEL DATA AND ANALYTICS FOR SOCIAL SCIENCE AND HEALTHCARE RESEARCH

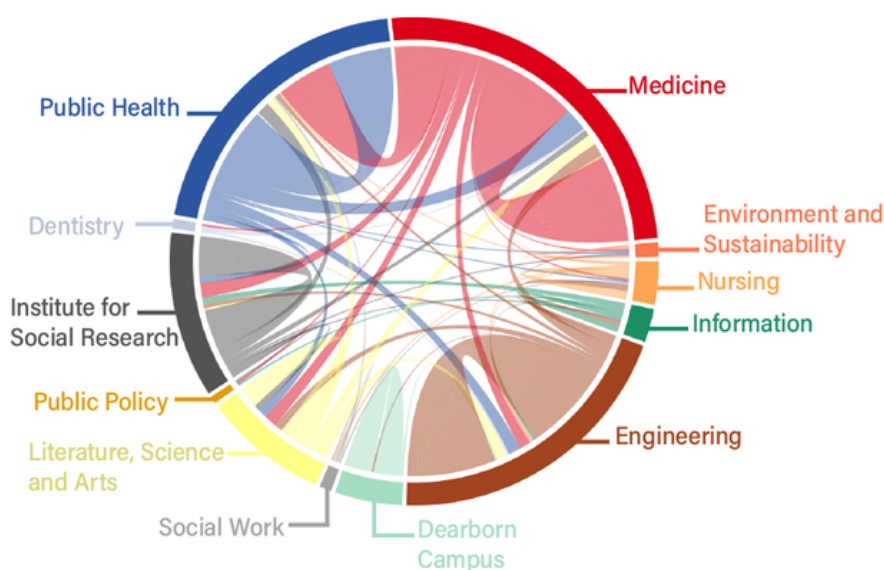
MIDAS aims to boost existing research strengths at the University of Michigan such as in social science and healthcare research. It does so through supporting researchers to use novel data types and cutting-edge data analytics to measure and understand society, and to improve health intervention. Highlights include: Center for Data-Driven Drug Discovery and Treatment Assessment: With a grant from the NSF Industry-University Cooperative Research Centers Program, MIDAS has established this center in collaboration with a dozen of industry partners. The Center will focus on developing ML methods for drug discovery and repurposing; enabling federated ML over encrypted databases; and providing an industry-wide and vendor-agnostic secure data hub for pharmaceutical and patient data. Unstructured data for social science: Through training and research connection events, MIDAS brings together methodologists and social scientists to enable the use of text, audio, and video data to address major social science research challenges. In addition, MIDAS works with industry and non-profit organizations to connect their data with academic researchers.

COLLABORATION ACROSS ACADEMIA, INDUSTRY AND THE PUBLIC SECTOR

MIDAS is also the university's "front door" for external collaborators of data science and AI, and has built extensive collaboration with academic data science institutes, industry, government and community organizations to advance research and promote Data for Social Good.

The Future Leaders Summit is a highlight that promotes collaboration among data science institutes and to foster the careers of future research leaders. Participants of this annual event are PhD students and postdocs from universities with mature data science programs as well as those beginning to build such programs, from major research universities to minority-serving institutions.

More than half of all participants are women and underrepresented minorities. The theme of the Summit is "Responsible Data Science and AI." Data for Social Good.



MIDAS researchers and students carry out data management and analytics projects to support the data strategy of government and community partners, including the City of Detroit, Native American tribal nations and other organizations in Michigan. Through such projects, we aim to connect cutting-edge research with immediate societal needs.



SCHOOL OF DATA SCIENCE AND SOCIETY

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

SUMMARY

We envision a world made healthy, safe and prosperous for all through data-informed decisions. Our school's focus on society will allow us to utilize innovative ways to use foundational and translational data science for the public good.

ORGANIZATIONAL STRUCTURE

School, partnering with other schools, departments and institutes

SOCIAL

email: sdss@unc.edu

web: datascience.unc.edu

twitter: @UNCSDSS

linkedin: UNC School of Data Science and Society

youtube: @UNCSDSS

LOCATION

Chapel Hill, North Carolina

PROGRAM OVERVIEW

We envision a world made healthy, safe and prosperous for all through data-informed decisions. Although UNC-Chapel Hill is not the first to establish a data science school, we believe the way we approach this growing field makes our program unique and especially relevant in our constantly evolving world.

Over the past decades, Carolina has developed and cultivated world-renowned scholarship and research in data science. We are honored to have the opportunity to build upon that foundation by creating an innovative curriculum and research portfolio through the school to serve our students and community, the state of North Carolina, and the nation. We will change the field of data science as we know it and better prepare students for the workforce of the 21st century.



DEGREES, PROGRAMS AND SPECIALIZATIONS

The School of Data Science and Society is in the process of developing multiple degree programs as well as certificate/modular programs in collaboration with the College of Arts and Sciences and other schools, which will launch in the next few years.

- B.S. and B.A. in Data Science
- Master of Applied Data Science, Online
- M.S. in Data Science, Residential
- Ph.D. in Data Science
- Modular & Certificate Programs in Data Science

Visit datascience.unc.edu/academics

for current programs at other UNC-Chapel Hill schools.



RESEARCH \ ENGAGEMENT \ INNOVATION

Renaissance Computing Institute (RENCI)

UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

SUMMARY

RENCI is a highly collaborative research institute at UNC-Chapel Hill that develops and deploys advanced technologies to enable innovative research and discovery in high performance computing (HPC), informatics, data mining, data linking, and secure computing.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DATA SCIENCE SPECIALIZATIONS

Clinical Informatics & AI, Data Science & Analytics, Earth Data Science, Network Research & Infrastructure, and Software Architecture

PROGRAM STATISTICS

- Number of core staff: 49
- Research and teaching staff: 63
- Domain scientists: 10

SOCIAL

email: comms@renci.org

web: renci.org

twitter: @RENCI

linkedin: Renaissance Computing Institute

facebook:

facebook.com/renci.org

youtube: @rencimedia9122

LOCATION

100 Europa Dr, Suite 540
Chapel Hill, NC 27517

RENCI'S DATA SCIENCE COMPUTATIONAL PLATFORM

RENCI researchers have developed HeLx, a flexible computational workspace for any scientific domain. The tool allows researchers to bring together tools specific to their work in a secure, scalable portal. A version tailored for educational use, EduHeLx, has been developed and deployed in a pilot capacity in Fall 2021 and Spring 2022 in the UNC-Chapel Hill course, COMP 116: Introduction to Scientific Programming. EduHeLx is being used again in the course, CHIP 690: Foundations of Clinical Data Science, in Spring 2023. As UNC-Chapel Hill continues to develop its School of Data Science and Society (SDSS), EduHeLx has the potential to serve as a primary data science computational platform for data science education at the University.



SOUTHBDHUB

The **South Big Data Hub** serves the Southern U.S. Census Region and is part of a network of four regional Big

Data Hubs (South, Midwest, Northeast, and West Big Data Hubs) launched by the National Science Foundation to engage local or regional stakeholders in big data research and permit a focus on regional issues. The South Hub is managed jointly by the Georgia Institute of Technology and RENCI, with more than 1300+ members from universities, corporations, foundations, and cities.



The **National Consortium for Data Science (NCDS)**, founded by RENCI, is a collaboration of leaders in academia, industry, and regimereformed to address the data challenges and opportunities of the 21st century.

The NCDS helps members take advantage of data in ways that result in new jobs and transformative discoveries. We connect diverse communities of data science experts to support a 21st-century data-driven economy by: 1) Building data science career pathways and creating a data-literate workforce, 2) Bridging the gap between data scientists in the public and private sectors, and 3) Supporting open and democratized data.



The **iRODS Consortium**, founded by RENCI, brings together businesses, research organizations, universities, and government

agencies to ensure the sustainability of iRODS by guiding further development of the software, growing the user and developer communities, and facilitating iRODS support, education, and collaboration opportunities. The iRODS Consortium maintains and supports a commercial-grade distribution of iRODS and fields a team of software developers, application engineers, and support staff housed at RENCI. Each year, the Consortium hosts the iRODS User Group Meeting, a symposium that draws 100+ participants to share iRODS technologies and case studies.

SUMMARY

The School of Data Science at UNC Charlotte commits to excellence in education, research, community engagement, and inclusion to shape and lead the future of data science education. We teach students to be responsible and ethical data science practitioners, leaders, and researchers in an increasingly data-driven and global society.

ORGANIZATIONAL STRUCTURE

School

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- B.S. in Data Science
- M.S. in Data Science and Business Analytics
- M.S. in Health Informatics and Analytics
- Undergraduate Certificate in Sports Analytics
- Graduate Certificates in Data Science and Business Analytics, Health Informatics and Analytics
- Specializations in Engineering, Health and Human Services, Computer Science, Business, Humanities, Social Science, Statistics

PROGRAM STATISTICS

- Joint and Affiliate Faculty: 80
- Staff: 6
- Students:
 - Undergraduate: 161
 - Graduate: 315

LOCATION

Suite 1028 Colvard
9105 University Rd
Charlotte NC 28223

PROGRAM OVERVIEW

Our B.S. in Data Science is fully integrated with the social sciences. The undergraduate curriculum is built around four interdisciplinary studio classes. Studio courses are team-taught by one faculty recruited from a technical background and a second from a specific content domain.

Faculty from Software and Information System and Computer Science are partnered with Faculty from Sociology, Ethics, Political Science, and Criminal Justice to deliver the lab-based studios. Students work in teams to apply the tools of data science to real-world, community-based projects. The complexity of the problems increases at each level culminating within the fourth-year capstone studio, Data Science for Social Good, where students combine technical, analytic, interpretive, and social dimensions to design and execute a full data science project.

ETHICS IN DATA SCIENCE

Ethics was designed into data science courses and scaffolded learning objectives across all four years. As an interdisciplinary program rooted in a five-college partnership, our commitment is to incorporate liberal arts and science principles into a traditional math and computing-heavy major, specifically to address complex ethical issues embedded in data science.



"One hundred percent of our data science courses at the undergraduate level address the ethical issues in data science," said Dr. Angela Berardinelli, senior lecturer for the College of Computing and Informatics and the School of Data Science.

"Other programs tend to offer a single elective on ethics or create a module within an introductory or advanced course." The major not only informs students about data ethics in the classroom, but will also enable them to engage with community partners to observe the impact of data, privacy, and their work in real life. Students begin with the basics of data ethics, gradually adding the evaluation of ethical debates and arguments, then concluding with learning how to conduct an ethical audit of real-world scenarios within data science.



SOCIAL

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facebook: @UNCCCharlotteSDS

instagram: @cltdatascience

INDUSTRY PARTNERSHIPS

We have very strong industry partnerships. Community is one of the four central pillars in the School of Data Science's (SDS) mission statement. Specifically, our goal is to, "Engage the Charlotte and campus communities by creating accessible pathways for research and practice." From the inception of our first degree offering in Health Informatics, we have relied on the support and counsel of an industry advisory board made of industry and non-profit leaders in the region. As we added degree programs and the Data Science Initiative has grown into the School of Data Science, our Industry Advisory Board has evolved.

Over 25 companies and community organizations are represented on our board. They are local, regional and national entities that represent healthcare, financial services, energy, manufacturing, and retail. Our success is predicated on their support and engagement.



INTERDISCIPLINARY PROGRAM

We are structured as an interdisciplinary School that is jointly governed by 5 colleges. Within the academic sphere, the School of Data Science is governed by an Academic Advisory Board made up of five colleges: The Belk College of Business, The College of Computing and Informatics, The College of Health and Human Services, and the William States Lee College of Engineering. The SDS Faculty is composed of more than eighty Affiliate, Joint, and Core faculty. This interdisciplinary collaboration reaches into almost every college and a majority of academic departments at UNC Charlotte.

Support ADSA's work...

Become a Member!

ADSA members support our team to develop events and resources that benefit the entire data science community. Membership is open to any academic unit, non-profit institution, or individual engaged in data science in higher education or interested in supporting academic data science from adjacent sectors.

Members enjoy a variety of special benefits:

INSTITUTION MEMBERSHIP

Annual cost: \$5,000; discounted rate of \$1,000 for Minority Serving Institutions, 2-year colleges, and small teaching colleges

- Full individual ADSA Membership for up to 5 participants (\$1000 value)
- One guaranteed invitation to the invite-only Data Science Leadership Summit
- A FREE Sponsor Box in the Data Science Community Newsletter (\$500 value); OR 3 Featured Job or Event ads (\$600 value)
- 2-page entry in the ADSA Member Book and inclusion in the Member Directory

RESEARCH LAB/SMALL INSTITUTION MEMBERSHIP

Annual cost: \$800 for any non-profit sector, including academia and government

- Full individual ADSA Membership for 2 participants (\$400 value)
- 1/2-page entry in the ADSA Member Book
- 2 shout-outs or advertisements on social media and in our ADSA Monthly Newsletter
- Optional photo and shout-out to your group in the Data Science Community Newsletter (8,000+ subscribers)

INDIVIDUAL MEMBERSHIP

Annual cost: \$50 for students and postdocs; \$200 for academic, non-profit, and government employees; \$500 for all other sectors

- Discount of \$100 off ADSA Annual Meeting registration or a Featured Job or Event listing in the Data Science Community Newsletter
- Opt-in to an ADSA member directory available only to other members and/or the public ADSA member directory
- Advance access to ADSA community-built resources
- One shout-out for a job ad, event or program announcement to our ADSA Community via our Monthly Newsletter and social media



Ready to join?

Learn more:
tinyurl.com/ADSA-membership



DATA INSTITUTE FOR SOCIETAL CHALLENGES

The UNIVERSITY of OKLAHOMA

SUMMARY

Data Institute for Societal Challenges (DISC) is creating innovations in data science, artificial intelligence (AI), machine learning (ML), and data-enabled research. DISC develops and grows convergent research teams dedicated to solving local to global-scale challenges.

DEGREE PROGRAMS

- OU offers a variety of undergraduate and graduate majors, minors, and certificates in data science and other related fields.

DISC SPECIALIZATIONS

- Data Science Applications
- Human-Guided Artificial Intelligence and Machine Learning
- Human-Computer Teaming
- Predictive Analytics
- Decision-Making Environments and Visual Analytics
- Scalable Software and Hardware Architectures

PROGRAM STATISTICS

- Number of directory members: 313
- Number of affiliated members: 170

LOCATION

Five Partners Place
201 Stephenson Pkwy, Ste 4600
Norman, OK 73019

DISC'S ROLE AT THE UNIVERSITY OF OKLAHOMA

DISC is playing a key role in OU's strategic plan. The Institute is integrated into and provides foundational capabilities to enable advancing the four strategic research themes: Aerospace, Defense and Global Security; Environment, Energy, and Sustainability; the Future of Health; and Society and Community Transformation.



The four themes were created to address specific global challenges with convergent research partnerships using OU's expertise. We believe that this, along with the integration of DISC with the University's strategic plan, ensures focus, relevance, and opportunities for both impact and success.

DISC COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION

DISC is committed to achieving a diverse, equitable, and inclusive data science community by embracing and valuing each person's unique contributions, background, and perspectives.

CREATIVE ACTIVITIES AND SEED FUNDING TO ADVANCE RESEARCH AT OU

DISC, in partnership with other OU centers and institutes, has hosted a variety of creative activities to connect researchers across campuses. Creative activities at OU provide an opportunity for faculty, staff, and students to meet new colleagues and share research interests or expertise. To date, DISC has engaged with over 1,000 individuals.

DISC has established a research seed funding program designed to incentivize transdisciplinary, convergent research teams focused on tackling grand challenges. Seed funding allows OU researchers to incubate ideas with the potential for future extramural support. To date, DISC has awarded over \$417,00 in seed funding. This program has also been expanded to graduate students, and the DISC team has awarded \$5,000 in seed funding. In Spring 2023, DISC will roll out two fellowship opportunities for postdoctoral researchers to support research and professional development toward their career goals.

SOCIAL

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web: ou.edu/disc

facebook: [@DISCatOU](https://www.facebook.com/DISCatOU)



Penn Arts & Sciences

Data Driven Discovery

SUMMARY

Penn's School of Arts and Sciences launched the Data Driven Discovery Initiative in 2021 to promote the development and use of data science in the physical sciences, life sciences, social sciences, and humanities.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

PROGRAM STATISTICS

- Number of core staff: 1
- Number of affiliated faculty: 31

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Survey Research and Data Analytics Minor
- Digital Humanities Minor
- Data Analytics and Psychological Sciences, BAAS
- Data Analytics and Social Sciences, BAAS
- Data Analytics, Certificate
- Data Science Concentration, MPA

LOCATION

McNeil Building 558
3718 Locust Walk
University of Pennsylvania
Philadelphia, PA 19104-6286

PROGRAM OVERVIEW

The Data Driven Discovery Initiative (DDDI) serves as a hub for data science education and research in the University of Pennsylvania's School of Arts and Sciences. We believe that data science is a powerful avenue for researchers in disciplines as diverse as sociology, neuroscience, and astrophysics to exchange ideas and work together on cutting-edge research. DDDI sponsors events featuring invited speakers, forums for interactions aimed at tackling current data issues, data bootcamps for undergraduates, postdoctoral fellowship programs, and seed grants for faculty pioneering data science work for social good. Affiliated data centers include Warren Center for Network and Data Sciences, Wharton Statistics and Data Science Department, Price Lab for Digital Humanities, Population Studies Center, Penn Program on Opinion Research and Election Studies (PORES), and the Sociology Methodology Working Group.



TRAINING AND EDUCATION PROGRAMS

DDDI sponsors and supports a number of training programs throughout the year. The Summer Data Science Hangouts is an 8 to 10-week program that aims to introduce data science applications and skills to undergraduates involved in research. In these summer workshops, Penn faculty members from both the natural and social sciences present work that applies data science to their research. Undergraduates also attend tutorials led by our postdocs and graduate students on data science methods. DDDI also sponsors a two-week Summer Institutes in Computational Social Sciences program for early career researchers on computational techniques used in the social sciences. During the school year, Penn's Research Data & Digital Scholarship group hosts biweekly meetups where students and researchers can drop-in to get assistance and share projects related to GIS, Python, and R.



SOCIAL

email: ddd-info@sas.upenn.edu

web: web.sas.upenn.edu/data-science

twitter: @PennDDDI

DATA SCIENCE FOR SOCIAL GOOD

DDDI provides seed grants to support faculty projects that utilizes data science methods to address societal challenge that affects the well-being of a large number of people, including but not limited to: health, public safety, justice, clean air and water, education, employment, transit, and political representation.



POSTDOCTORAL FELLOWSHIP PROGRAM

Our data science postdoctoral fellows are a select group of researchers who utilize data science approaches to answer questions in the arts and sciences. Fellows benefit from funding, participation in DDDI activities such as seminars and weekly lunchtime faculty talks and discussions, and interactions with students and postdocs across the school with overlapping interests.



EVENTS

DDDI sponsors a variety of events related to promoting data science training and research. These have included workshops on accessing and using data from the US Census Bureau, a conference on using big data and international humanitarian work, democratizing data in countries, applications of data in environmental and sustainability research, and a panel discussion on generative AI, among others.



GOERGEN INSTITUTE FOR DATA SCIENCE

SUMMARY

Established in 2015, the Goergen Institute for Data Science (GIDS) serves as University of Rochester's integrative data science hub. The Institute offers a variety of data science degree programs, supports interdisciplinary data science research, and fosters industry-academia data science collaborations.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Bachelor of Arts (BA)
- Bachelor of Science (BS)
- Master of Science (MS)
- Advanced Certificate
- BA/BS specializations: biology, biomedical signals and imaging, brain and cognitive sciences, earth and environmental science, economics and business, linguistics, physics, political science
- MS specializations: computational methods, statistical methodology, health and biomedical sciences, business and social science

PROGRAM STATISTICS

- Number of core professional staff: 5
- Affiliated faculty members: 85
- Total Enrolled Students: 266
 - 201 BA/BS
 - 55 MS
 - 10 advanced certificate

LOCATION

1209 Wegmans Hall
University of Rochester
Rochester, NY 14627

EDUCATION

GIDS offers three degree programs, a Bachelor of Arts (BA)/Bachelor of Science (BS) program in data science, a Master of Science (MS) in data science, and an advanced certificate in data science targeted at working professionals. All three programs are flexible and allow students to tailor their degree to their interests. Students are equipped with the technical skills to process and draw conclusions from data, and then trained to apply their conclusions to real-world challenges.

A unique aspect of the undergraduate and MS programs is the capstone course. Through a semester-long capstone project, students get a taste for conducting real-world analytics projects using data provided by

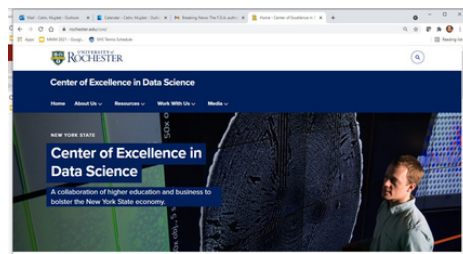


partnering organizations. Students work in teams to understand their partner's business problem, clean and analyze data, and devise an appropriate solution. GIDS students also have access to over 80 affiliated faculty members from across the University of Rochester campus, and can participate in exciting, interdepartmental research collaborations while earning their degrees.

ECONOMIC IMPACT

In 2014, New York State established the Center of Excellence (CoE) in Data Science at the University of Rochester. The CoE in Data Science is dedicated to supporting businesses in New York State through the application of data science methods and tools that solve challenges and deliver critical insights. The Center is funded by the New York State Department of Economic Development's Division of Science, Technology, and Innovation (NYSTAR) and is housed in the Goergen Institute for Data Science. The NYSTAR CoE program helps to drive regional and statewide economic development by supporting basic

research, training, and technology development in data science. Over the last three years, the Center has generated a direct economic impact of over \$110 million and helped create or retain more than 66 jobs. More information can be found at sas.rochester.edu/dsc





SOCIAL

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web: sas.rochester.edu/dsc

twitter: @UofRDataSci

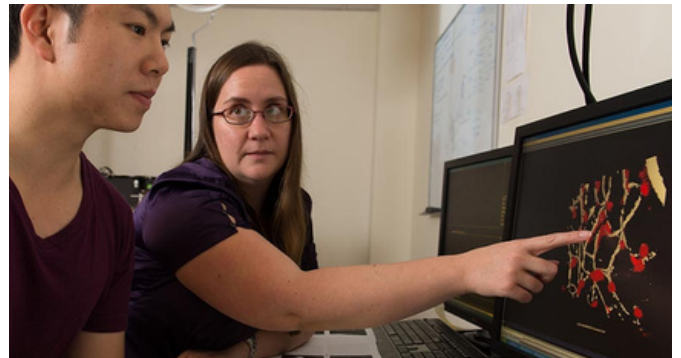
linkedin: Goergen Institute for Data Science (GIDS)

RESEARCH

GIDS functions as the center for data science research at the University of Rochester (UR) and brings faculty from across the University together to work on interdisciplinary data science research projects. The Institute is currently involved in multiple collaborative grants in data science, including a grant from the Arnold and Mabel Beckman Foundation on light-sheet microscopy and data science, a National Science Foundation (NSF) PhD training program on augmented and virtual reality, a joint NSF grant with faculty from Cornell University on foundations of data science, and a National Institutes of Health (NIH) grant on the brain's glymphatic system.

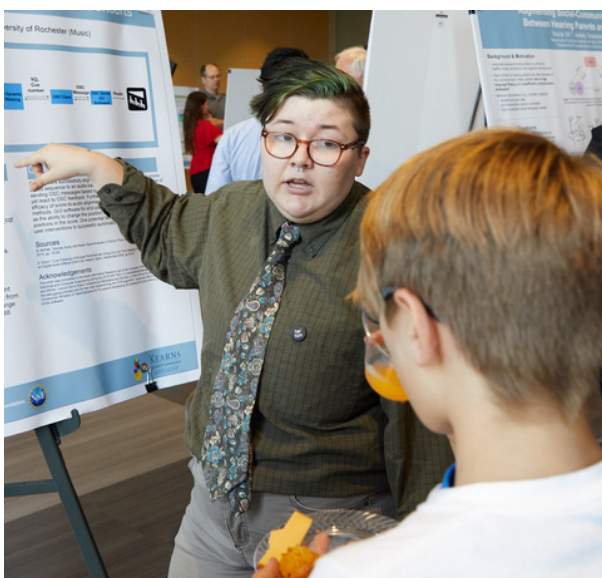
The Institute also supports six working groups, which explore data science research opportunities around the following themes:

- foundations of machine learning and artificial intelligence
- imaging, optics, and computer/human vision
- life sciences and biomedical data science
- health analytics and digital health
- human-data-system interfaces
- AI augmented learning and work



COMMUNITY OUTREACH

Throughout the year, GIDS organizes data science events for the University of Rochester community, including research seminars, hackathons, and meetups. The Institute also boasts a robust alumni network; each semester former GIDS students return to share their career stories and job search tips with current students.



GIDS also supports two summer NSF Research Experiences for Undergraduates (REUs). The Computational Methods for Understanding Music, Media, and Minds REU brings undergraduates from across the country to University of Rochester. Under the mentorship of UR faculty members, students explore exciting interdisciplinary research that combines machine learning, music theory, and cognitive science. In the Tripods REU and STEM for All summer research programs, students investigate the mathematical foundations of data science.

GIDS also hosts the Summer Institute for Computational Social Sciences (SICSS), a two-week learning experience that gives students and faculty the opportunity to study and research computational social sciences, tuition free.



USC Viterbi

School of Engineering

Data Science Program

SUMMARY

Located in the heart of Los Angeles, the University of Southern California is a global center for arts, technology and entrepreneurship that connects students from 64 countries. The USC Viterbi School of Engineering is consistently in the top 10 graduate engineering programs in the U.S. News and World Report rankings.

ORGANIZATIONAL STRUCTURE

The Data Science program is housed within the Department of Computer Science, with joint degrees with other schools and a university-wide center

DEGREES, PROGRAMS, AND SPECIALIZATIONS

See second page

PROGRAM STATISTICS

- Number of faculty: 24
- Number of technical staff: 10
- Affiliated Faculty: 8
- Students:
 - 900 graduate students
 - 100 undergraduates

LOCATION

941 Bloom Walk
Los Angeles, CA 90089

PROGRAM OVERVIEW: DATA SCIENCE FOR ALL

Our data science curriculum ranges from advanced computing curricula to courses that are accessible to students with no programming or computer science background. Carefully designed introductory courses on computational thinking and programming enable students to take advanced electives in machine learning, user experience design and strategy, knowledge graphs, and scalable data systems. Students learn to work on teams through experiential learning in course-long projects, hands-on homework, class exercises in groups, and capstone classes. Many students take internships during their studies, either in research labs in the engineering school or in local tech companies.

CAREER PATHWAYS

USC is second among all private universities in the number of graduates who join top tech companies. Our graduates pursue careers as leaders of data science teams in diverse sectors including technology, entertainment, health, and policy. Our alumni network spans Fortune 100 companies such as Apple, McKinsey, Capital One, Google, Meta, Amazon, LinkedIn, Bloomberg, and Associated Press, as well as many locally headquartered companies such as Fox Entertainment, Netflix, ESRI, Age of Learning, Warner Bros Entertainment and myriad others that are part of the vibrant Los Angeles tech landscape known as Silicon Beach.



FACULTY: RESEARCHERS AND PRACTITIONERS

Faculty in this program run large data science projects in natural language processing, social network analysis, biomedical data, environmental modeling, and social justice. Most of our faculty are researchers at USC's Information Sciences Institute, a first-rate catalyzer of advances in artificial intelligence, cybersecurity, and microelectronics for more than five decades. Some instructors are industry and government practitioners that lead large teams and contribute to community open source software projects.

THE DATA SCIENCE COMMUNITY AT USC

Our data science program holds semester-long DataFest events that enable students to participate in real-world data science projects advised by faculty across the campus. The GRIDS data science student association provides targeted tutorials and invited presentations from industry on practical applications.



SOCIAL

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facebook: facebook.com/USCViterbi

instagram: @USCViterbi

youtube: @USCViterbi

CORE PROGRAMS

We offer programs at all levels that enable students to learn about a range of topics in data science. Students with previous coursework or experience in data science can work with advisors to design customized curricula.

USC undergraduates can enlist in the Progressive Degree Program (PDP) which enables them to apply undergraduate coursework toward the completion of a USC master's degree in as little as one additional year.

Graduate programs:

- Master of Science in Applied Data Science
- Master of Science in Cyber Security Engineering
- Graduate Certificate in Data Science Foundations
- Graduate Certificate in Applied Data Science



Undergraduate programs:

- Bachelor of Arts in Data Science
- Foundations of Data Science Minor
- Bachelor of Science in Artificial Intelligence for Business

INTERDISCIPLINARY JOINT DATA SCIENCE MASTERS PROGRAMS

We offer several master's degree programs that enable students to acquire data science skills in the context of a particular discipline. These programs are designed to gently introduce students to programming and computing. Students take courses in computing and data science in the Viterbi School of Engineering as well as courses on quantitative methods and advanced topics in that discipline. All these programs are offered online through our #1 ranked DEN@Viterbi blended platform, enabling students from around the world to complete their graduate degree from a distance while balancing work, life and family.

Master of Science in Communication Data Science, joint with the USC Annenberg School of Communication & Journalism

Master of Science in Spatial Data Science, joint with the USC Dornsife College of Letters, Arts, and Sciences

Master of Science in Public Policy Data Science, joint with the USC Price School of Public Policy

Master of Science in Healthcare Data Science, joint with the USC Keck School of Medicine

Master of Science in Environmental Data Science, joint with the USC Dornsife College of Letters, Arts, and Sciences

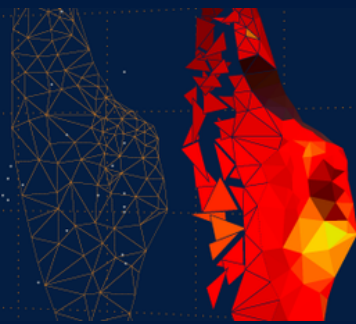
REMOTE LEARNING

Remote learning is offered for all our graduate data science degree programs through USC's Distance Education Network (DEN@Viterbi). USC is ranked number one in Online Graduate Computer Information Technology Programs (computer science), Online Graduate Engineering Programs, and Online Graduate Computer Information Technology Program (computer science) for Veterans.





THE UNIVERSITY OF TEXAS AT EL PASO
DATA SCIENCE
COLLEGE OF SCIENCE



SUMMARY

The Department of Mathematical Sciences at The University of Texas at El Paso (UTEP) houses data science degrees at the bachelors, masters, and doctoral levels. The programs emphasize moving from theory to practice in data science for working in interdisciplinary settings involving data-intensive analysis.

ORGANIZATIONAL STRUCTURE

Our program is housed within the department of Mathematical Sciences and has a diverse faculty from programs/units across campus

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- BS in Mathematics with Concentration in Data Science
- MS in Statistics and Data Science
- PhD in Data Science
- Graduate Certificate in Big Data Analytics
- Undergraduate Minor and Concentration in Data Science

PROGRAM STATISTICS

- Number of faculty: 14
- Number of core staff: 1
- Number of affiliates: 53
- Number of students:
 - BDA Certificate: 48
 - MS: 21
 - PhD: 43

LOCATION

500 W. University Ave.
Bell Hall 311
El Paso, TX 79968

PROGRAM OVERVIEW

This interdisciplinary program is open to qualified individuals from many disciplines who require training on applying data in their fields. The program emphasizes the application and development of data science methodologies, incorporation of real-world applications through industry and government collaborations, and development of students' professional skills, such as communication and collaboration. The program, designed in consultation with regional industry partners, prepares students to work in industries where there are still critical shortages of data science talent.



UTEP DATA SCIENCE COLLABORATIONS

Faculty and students in the data science program regularly collaborate on research projects in partnership with other divisions at UTEP and outside institutions.

Some of these are listed below:

- Differential Privacy collaboration with Pacific Northwest National Labs: Projects aims to synthesize data that guarantees differential privacy for individuals in EHR data while retaining population statistics.
- Research Enrichment Core of BUILDing SCHOLARS (NIH): Five year project using data analytics to study factors influencing biomedical research training of underrepresented minorities.



SOCIAL

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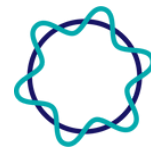
- Border Biomedical Research Center (NIH-BBRC): Long-term project that addresses issues of Hispanic Health Disparities unique to the far West Texas Borderplex. UTEP has developed an extensive cadre of collaborators consisting of experts from regional academic, medical, and community partners with the goal to address cancer health disparities that permeate our majority Mexican American population.

DATA ANALYTICS LAB



The Data Analytics Lab offers data, statistical, and mathematical analysis and modeling to internal (UTEP) and external customers. This lab focuses on data analytics projects that involve external partnerships, seeks to involve students in the Data Science PhD program, supports professional development, and provides service to organizations that cannot afford a full-time data scientist. Its goal is to promote interdisciplinary research, while increasing publications and grants, and contributing to attracting and retaining high-quality faculty.





Academic
Data Science
Alliance

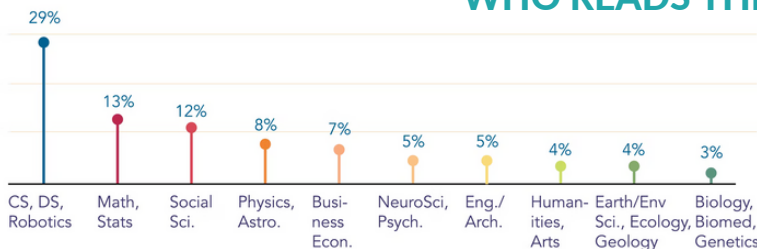
Subscribe to the DSCN at
tinyurl.com/DSCN-sign-up

Data Science Community Newsletter

The Data Science Community Newsletter (DSCN) summarizes data science news in academia, industry, and government, with a sense of humor and a readership of >8,000!

Many of our stories are sourced from our readers' blogs, Twitter feeds, and arxiv.org articles which gives the writing a conversational, of-the-moment, community-led angle. We also provide a data visualization of the week, calls for papers, tools, spotlights, and select job and event postings.

WHO READS THE DSCN?



Our readers are intellectually diverse!
Most have a Masters degree or higher
and come from a wide range of
disciplines and backgrounds.

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We invite limited paid advertisement to support our writers and editors
and to help our readers reach their 8,000+ peers



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Send an email to info@AcademicDataScience.org and let's discuss the options!



Learn more:
tinyurl.com/DSCN-about

SUMMARY

The only school of its kind at a Carnegie R1 U.S. Hispanic Serving Institution, UTSA's School of Data Science offers data-intensive degree programs and research across every discipline. Located in downtown San Antonio, the school is the cornerstone of the university's 10-year strategic growth plan.

ORGANIZATIONAL STRUCTURE

The UTSA School of Data Science is an academic support unit consisting of multidisciplinary faculty offering graduate level degrees and data-intensive research

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- MS in Artificial Intelligence
- MS in Computer Science – Data Science Concentration
- MS in Data Analytics
- MS in Statistics and Data Science
- PhD Applied Statistics
- UTSA also offers five BS degrees in scope of data science and AI
- Certificates in:
 - Data Science – Graduate
 - Data Science – Undergraduate
 - Gen AI
 - SDS also offers bootcamps in Coding and UX/UI

PROGRAM STATISTICS

- Number of core faculty: 30
- Number of core staff: 5 with 5 additional funded positions to be filled
- In addition to the Core Faculty, 8 faculty members make up the SDS Faculty Council, and all faculty will be invited to affiliate beginning in Spring 2023
- Number of students: 400

LOCATION

506 Dolorosa Street
San Antonio, TX 78204

SAN PEDRO I

In January 2023, the School of Data Science celebrated its launch and the grand opening of its new home, San Pedro I. The new 167,000-square-foot, six-story building is located alongside the downtown San Pedro Creek Culture Park and expands San Antonio's tech corridor. The School of Data Science's vision is to increase inclusion and success in a field that has historically lacked diversity. This aligns with UTSA's long-term strategy to become a model for student success, a great public research university, and an exemplar for strategic growth and innovative excellence.



MATRIX AI CONSORTIUM FOR HUMAN WELL-BEING

Artificial intelligence (AI) is transforming the world with its explosive growth. The consortium brings thought leaders together to advance AI to generate high-impact solutions that enable positive changes in communities.

OPEN CLOUD INSTITUTE

The School of Data Science is home to the Open Cloud Institute. The institute supports faculty research activities and projects on cloud computing and data analytics.

SOCIAL

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linkedin: UTSA School of Data Science





UNIVERSITY OF
TORONTO



DATA SCIENCES
INSTITUTE

SUMMARY

The University of Toronto Data Sciences Institute (DSI) is a hub and incubator for data science research, training, and partnerships. Our mission is to accelerate the impact of data sciences across disciplines to address pressing societal questions. We facilitate collaboration and the development and application of new methodologies and tools.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

PROGRAM STATISTICS

- Core professional staff: 9
- Affiliated members: 1,844
- Students and trainees:
 - Doctoral Student Fellows: 9
 - Postdoctoral Fellows: 7
 - Undergraduates: 35

DEGREES, PROGRAMS, AND SPECIALIZATIONS

Data Sciences Certificate

LOCATION

700 University Avenue
Toronto, Ontario
Canada

CATALYZING CROSS-DISCIPLINARY RESEARCH & TRAINING

We support collaborative research teams to:

- Enable the development and application of cutting-edge technologies to extract knowledge from large sources of data to answer pressing societal questions in ways previously not considered or not possible.
- Support research that implements existing methods in innovative ways across domains.
- Elevate the impact of methodological research beyond its theoretical advancement.
- Enhance the opportunities for success for the growing complement of researchers who operate at the interface of methods and domains.
- Promote equity, diversity, and inclusion in our membership and the research questions, methods, and approaches, to advance robust and inclusive excellence in data science research and training.

Our strategic objectives are to:

1. Shape the evolution of the field of data science including the development of novel methodologies
2. Catalyze opportunities for convergence of knowledge domains and equitable solutions
3. Cultivate inclusive skills for success
4. Foster and catalyze knowledge mobilization to advance the public good





UNIVERSITY OF
TORONTO

SOCIAL

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website: datasciences.utoronto.ca

twitter: @UofTDSI

linkedin: Data Sciences Institute, University of Toronto

TRAINING & EDUCATION

We are committed to supporting current and future generations of cross-disciplinary data science researchers.

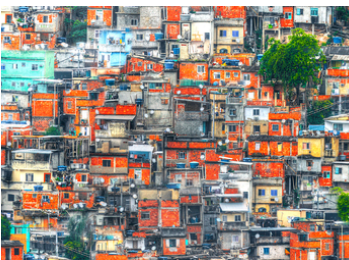
The DSI provides programming to advance trainee and researchers data science skills, professional development and career opportunities:

- **Summer Undergraduate Data Science (SUDS) Research Opportunities:** Undergraduate students interested in exploring data science as a career path have an exciting opportunity to engage in research led by DSI member faculty and scientists. SUDS Industry partnerships support internship research opportunities with companies, government and not-for-profit organizations.
- **Doctoral Student and Postdoctoral Student Fellowships** support multi/interdisciplinary training and collaborative research in data sciences. The DSI co-leads the prestigious Eric and Wendy Schmidt AI in Science Postdoctoral Fellows at the University of Toronto.
- **Faculty bootcamps** offer researchers opportunities to immerse themselves in data analytics workshops including machine learning and social science methods.

THEMATIC PROGRAMS & INITIATIVES

Thematic Programs and initiatives represent areas of research focus for DSI that are drawn from the DSI community.

Inequity



Encouraging the generation of evidence (data and inference) and tools that enhance our understanding of inequity while supporting equitable social change.

Reproducibility



Development of widely adoptable methodology, processes, and infrastructure to share data and code locally and in privacy-compliant ways, and the development of infrastructure, methods and models that support reproducible and reliable research.

Computational & Quantitative Social Sciences



Development of new ways of analyzing complex data structures commonly used by social scientists, such as temporal, textual, spatial, and network-based data.

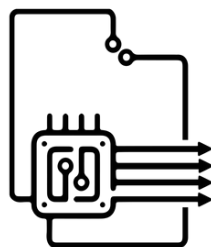
Responsible Data Science



Methodological and epistemological approaches are supported, including critical analysis, social inquiry, phenomenology, qualitative investigations of lived experiences, content analysis, rhetorical approaches, and/or the creation or evaluation of models, algorithms, and other data science methodologies.

FOSTERING A DATA SCIENCE COMMUNITY OF RESEARCHERS AND PRACTITIONERS

As a focal point for university-wide efforts in computational and data-intensive research, the DSI offers community and network-building events. These include the Data Sciences Speaker Series, Inequity Speaker Series, Blitz Workshops in Computational & Quantitative Social Sciences, workshops such as Data and the Metaverse, and annual research days, as well as more informal meetings for junior faculty data scientists and women data scientists.



ONE UTAH

DATA SCIENCE HUB

UNIVERSITY OF UTAH

SUMMARY

The One Utah Data Science Hub is a university-wide effort designed to enhance research and infrastructure in data and data-enabled science. Led by Faculty Directors from across the university, the Hub facilitates interdisciplinary research focused on data science through two initiatives and in alignment with the Center for Data Science.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Undergraduate degrees in Data Science, Information Systems
- Graduate degrees in Biomedical Informatics, Business Analytics, Computational and Data Science, Computing: Data Management and Analysis, Cybersecurity Management, Information Systems
- Certificates in Business Analytics, Cybersecurity Management, Data Fluency, Data Science, Information Systems

PROGRAM STATISTICS

- Number of faculty: 5
- Number of staff: 1
- Number of Affiliated Members: 81

LOCATION

Salt Lake City, UT, USA

UTAH CENTER FOR DATA SCIENCE (UCDS)

As data science is becoming pervasive, and not limited to any field or subsets of fields, the research and service activities are organized through the UCDS. This center leads, organizes, and manages data science resources and research efforts at the University of Utah. The directors, core faculty, and affiliated members work to advance the fundamental principles and practices of data science through research, applications, and community engagement. The UCDS hosts a number of regularly occurring events that promote and build engagement in data science, including opportunities to engage with industry partners, regular seminars and learning opportunities, and a yearly Data Science Day.



DATA SCIENCE AND ETHICS OF TECHNOLOGY (DATASET) INITIATIVE

The DATASET Initiative is designed to engage foundational questions about the role of data in society. DATASET is interested in all research that advances our knowledge and understanding of data and data-derived infrastructure, including scholarship that advances storage capability and function, enhances visualization and analysis, critically investigates the logic and ethics of data tools, and develops policy and legal guidelines for meaningful data use. From machine learning that enhances our ability to detect problems and health-relevant outcomes to video games that confront players with moral dilemmas to educational workshops focused on ethical use of algorithms, the primary mission of the DATASET is to develop transdisciplinary research programs focused on the data challenges of our time. Specifically, DATASET aims to bring together research and expertise in the theoretical, technical, ethical, and policy/legal dimensions of data across the University of Utah to critically examine the function and impact of data science in addressing current grand challenges science and engineering and contribute to data-driven decision-making that impacts society.





SOCIAL

email: data-science-hub@utah.edu

web: <https://research.utah.edu/utah-data-science.php>

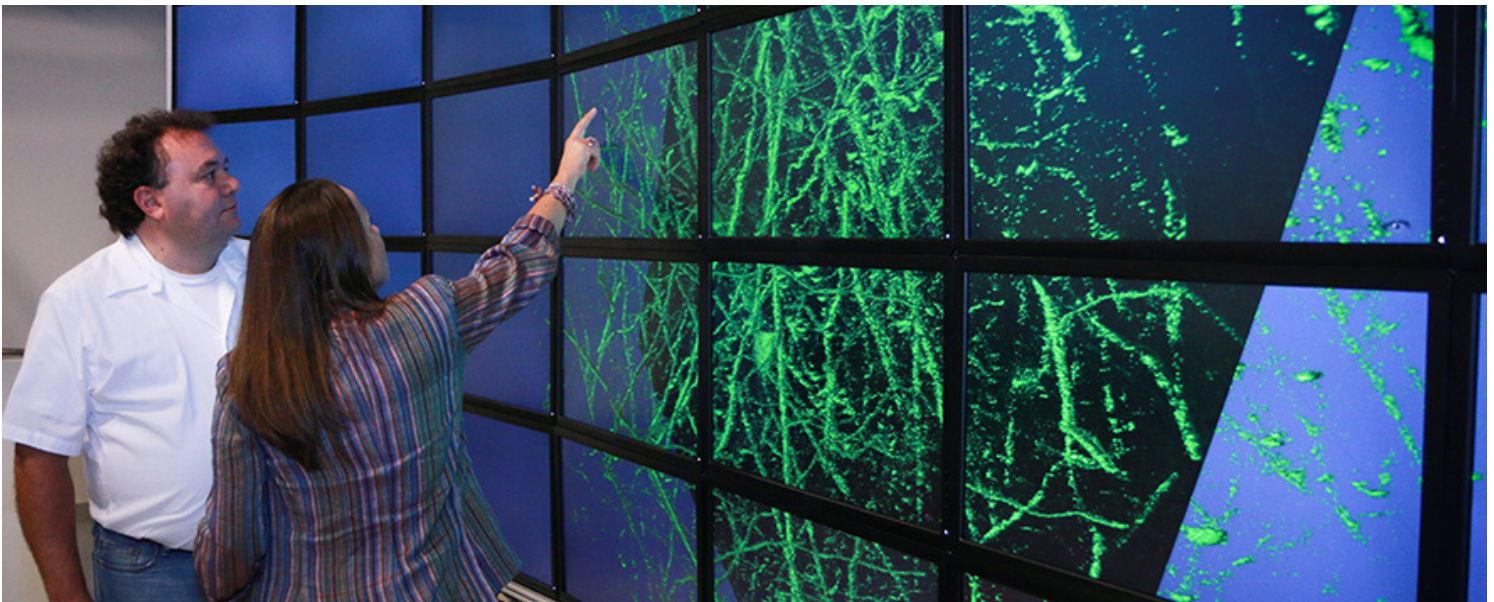
twitter: @UtahDataSciHub

DATA EXPLORATION AND LEARNING FOR PRECISION HEALTH INTELLIGENCE (DELPHI) INITIATIVE

Biomedical data science integrates large, complex data sets with innovative computational approaches to create actionable insights across biological and medical applications. The DELPHI Initiative is designed to catalyze interdisciplinary biomedical data science research to drive innovation in health and medicine. The DELPHI initiative has focused on four primary areas of growth: collaboration, education, infrastructure, and recruitment. Specifically, DELPHI has prioritized efforts to foster a community among data science researchers across the University of Utah through collaborative match-making and documentation of shared resources, expand data science training opportunities for researchers at all levels, invest in leading-class computing infrastructure to facilitate research growth and eliminate barriers to critical databases and datasets that are differentiating for University of Utah researchers, and recruit new data science faculty that build upon existing strengths and expand our expertise to poise the University of Utah for sustained research funding in data science.

PILOT SEED GRANT FUNDING

The One Utah Data Science Hub initiated a seed grant program in 2022 aimed at catalyzing new collaborations and innovative research in data science and data-enabled science that will lead to federal extramural grant applications. In the pilot award cycle, seven awards totaling \$300K were provided to researchers at the University of Utah.





SCHOOL of DATA SCIENCE

SUMMARY

The University of Virginia School of Data Science—the first of its kind in the nation—is guided by common goals: to further discovery, share knowledge, and make a positive impact on society through collaborative, open, and responsible data science research and education.

ORGANIZATIONAL STRUCTURE

School

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Ph.D. in Data Science
- M.S. in Data Science
- Dual Degrees (MD, Ph.D., MBA)
- Planned B.S. in Data Science (Fall 2024)
- Minor in Data Science
- Professional Programs & Certificates:
 - Deep Learning: A Hands-On Approach
 - Data Science for Business Strategy
 - Navigating the Path from Data To Policy

PROGRAM STATISTICS

- Number of Faculty: 23
- Number of Research Staff: 20
- Affiliated Faculty: 17
- Students enrolled in data science related programs:
 - 200 MSDS students
 - 16 Ph.D.
 - 460 data science minors

LOCATION

Charlottesville, VA

CHAMPIONING EQUITY

Our society faces immense challenges related to the COVID-19 pandemic, systemic racism, and broad economic uncertainty. At the School of Data Science, our mission remains clear. From our inception, we have sought to center ethics, inclusion, and transparency in all we do.

CREATING DIVERSE PROGRAM PIPELINES

In 2022, the School of Data Science launched the Data Justice Academy, a summer undergraduate research program for students from historically Black colleges and universities. We also partner with UVA's Star Hill Pathways program and foster middle and high school students from historically marginalized communities toward successful college admission.



NEW SCHOOL, NEW SPACE

The School of Data Science's new 60,000 square foot home is set to open in spring 2024. Open, collaborative spaces will transcend traditional boundaries and spark interdisciplinary connections between learners, researchers, and innovators.

NEW PROGRAMS

The School welcomed 16 students to the new Ph.D. in Data Science in fall of 2022 and plans to launch an undergraduate B.S. in Data Science in fall 2024 pending approval.

DATA AND OUR COMMUNITY

At the UVA School of Data Science, we are committed to open and responsible data science for the public good while supporting the needs of our local, regional, national, and global communities.

Researchers at the School of Data Science have used data from hospital monitors to better treat patients, credit card data to prevent fraud, and transportation data to reduce accidents. All of this requires cutting-edge



knowledge of data science tools and techniques, as well as the ability to put them into practice. That's why we collaborate with community, industry, and government to connect our work with theirs. Community engagement programs range from Capstone Research projects

with community partners focused on the public good to Code for Charlottesville, supporting local nonprofits through the power of data science, computing and student creativity.



SOCIAL

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linkedin: UVA School of Data Science

facebook: @uvadatascience

instagram: @uvadatascience

RESPONSIBLE DATA SCIENCE

Our field may be nascent, but its potential for producing nefarious outcomes has already been well documented. We are committed to teaching and practicing responsible data science, with the common good in mind. As the first school of data science in the country, we have an obligation to be a leader in the field and in education. That leadership is built upon an ethical partnership with all stakeholders, from schools and departments at UVA, to other universities worldwide, to the private sector, to government, to nonprofits, and to the general public. We are also leading our institution in furthering open scholarship and are establishing an institution-wide Open Scholarship Working Group.



FURTHERING DISCOVERY

The School of Data Science pursues high-impact research to further discovery, share knowledge, and transform society. Through their research, our faculty and students are building a better world in a variety of ways:

- **Democracy:** Investigating how terrorist groups recruit women through propaganda and examining risk for extremist violence.
- **Education:** Helping economically disadvantaged, underrepresented populations pursue pathways that have a higher probability of leading them to success.
- **Business:** Discovering what makes a job interview successful for both the candidate and the recruiter and learning how to mitigate bias in the recruiting process.
- **Health & Medicine:** Securing high-performance computing equipment and personnel to allow collaboration across the university on brain science research concerning autism, participating in translational biomedical data sciences, and more.
- **Cybersecurity:** Detecting broad-spectrum cyber threats almost immediately after they are launched - research made possible through a grant from the Department of Defense.
- **Environment:** Using NASA data collected aboard the International Space Station to examine and develop responses to climate change in the Shenandoah National Forest and beyond.



UNIVERSITY of WASHINGTON
eScience Institute

eScience Institute

UNIVERSITY OF WASHINGTON

SUMMARY

The eScience Institute was founded in 2008 with the mission to empower researchers and students in all fields to answer fundamental questions through the use of large, complex, and noisy data. From inception, the eScience Institute has functioned beyond departmental and college walls to exemplify the interdisciplinary breadth and complex dimensions of data science. Today, the Institute has grown to a mature organization with sustained positive impact through our education, research, and community building programs.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Masters in Data Science
- Undergraduate Minor
- 19 Graduate and 8 Undergraduate Specializations

PROGRAM STATISTICS

- Number of faculty: 14
- Number of staff: 24
- Affiliated Faculty: 145

LOCATION

Physics/Astronomy Tower (PAT)
6th Floor
3910 15th Ave NE
Seattle, WA 98195-1570

PROGRAM OVERVIEW

The University of Washington eScience Institute, one of the nation's first university data science institutes, grew out of the Moore-Sloan Data Science Environment effort which focused on identifying and tackling impediments to the broad and sustainable adoption of data-intensive discovery. From inception, the eScience Institute has functioned beyond departmental and college walls to exemplify the interdisciplinary breadth

and complex dimensions of data science. Today, the Institute has grown to a mature organization with sustained positive impact on the UW community through our education, research,



and community building programs. Key eScience personnel now hold leadership roles in the construction, commissioning and operations of federally-funded research initiatives such as Pangeo, the Rubin Observatory, and Interactive Oceans, as well as NSF-funded programs including CloudBank and the West Big Data Innovation Hub.

INSTITUTIONAL SCOPE, STRUCTURE, & ACTIVITIES

The institute comprises a community of innovators in the development and application of the techniques, technologies, and best practices of data science. The eScience conception of data science has always considered the full data science workflow, from project conception to data-driven discovery, and every step in between. With expertise in advanced statistical and computational techniques including artificial intelligence, machine learning, database management, visualization, and



research software engineering, our staff Data and Research Scientists have energized the WRF Data Science Studio into a nexus of data science activity on campus and virtually. We serve campus data science needs and propel data science

research forward via multiple channels, from open office hours to quarter-long engagements like the Incubator and Data Science for Social Good programs, to multi-year collaborative grants and centers. Our faculty, postdoctoral fellows, and graduate students are engaging in cutting-edge research pushing the methodology envelope and making new discoveries across a diversity of fields.



UNIVERSITY of WASHINGTON
eScience Institute

SOCIAL

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web: escience.washington.edu

twitter: @uwescience

linkedin: UW eScience Institute

youtube: @UWScienceInstitute

DATA SCIENCE INCUBATORS

The Data Science Incubator enables new science by bringing together data scientists and domain scientists to work on focused, collaborative projects. Each fall, we invite proposals for a quarter-long data-intensive research collaboration focusing on extracting insight from large, noisy, and/or heterogeneous datasets. Over the past 8 years, we have supported 61 projects with collaborators from 31 different departments. Previous incubator projects have led to long-term collaborations, publications, and grant awards.

Launched in 2015, the UW's Data Science for Social Good (DSSG) summer program partners Student Fellows with Data Scientists from the eScience Institute and Project Leads from academia, government, and the private sector, to find data-intensive solutions to pressing societal challenges. Previous projects have used diverse methods to address topics such as public health, homelessness, disaster response, voting rights and transportation. Keystones of the DSSG program include project-based discussions and training around data science ethics, human-centered design and stakeholder collaboration.



HACKWEEKS

The hackweek model has emerged within the data science community as a powerful tool for fostering the exchange of ideas in research and computation. In contrast to conventional conferences or workshops, hackweeks are intensive and interactive, facilitated by 3 core components: tutorials on state-of-the-art methodology, peer-learning, and on-site project work in a collaborative environment. This setup is particularly powerful for sciences that require not only domain-specific knowledge, but also effective computational tools and methodologies. The eScience Institute has extensive experience (uwescience.github.io/HackWeek-Toolkit) developing and facilitating hackweeks focused in particular domains, e.g. Neurohackademy and the Electrochemical Society HackWeek, as well as around particular datasets, e.g. the ICESat-2 and SnowEx Hackweeks.



data science @ uw

UNIVERSITY OF WISCONSIN - MADISON

SUMMARY

Data is reshaping our world, and data science @ uw strives to bring the power of fundamental and applied data science to all fields of study at UW-Madison and beyond. We are committed to fostering an inclusive culture in data science that fuels creativity and discovery.

ORGANIZATIONAL STRUCTURE

We are a collaborative team including institutes, centers, departments, and a school at UW-Madison

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Undergraduate Major in Data Science
- MS Statistics: Data Science
- MS Industrial Engineering: Systems Engineering and Analytics
- Engineering Data Analytics Online Program
- MS Business Analytics
- Master of Science in Psychology: Data Science in Human Behavior
- Master of Science in Educational Psychology: Learning Analytics
- Undergraduate Minor (certificate) in Data Science

PROGRAM STATISTICS

- Data Science majors: 1,000+
- Data Science certificates: 350+ students
- Hundreds of other students are enrolled in the rich array of data science graduate education

LOCATION

Madison, WI

AMERICAN FAMILY INSURANCE DATA SCIENCE INSTITUTE

The American Family Insurance Data Science Institute (DSI) is central to UW-Madison's strategic priority to grow its research enterprise and expand its global impact, supporting the scholarship of faculty, staff, and students. We view data science as intrinsically intersectional and embrace use-inspired research to catalyze innovation and collaboration between methodological and domain researchers. Our current focus as an institute is on building community, building capacity, and establishing DSI as a trusted partner. We aim to foster an inclusive and responsible culture in data science that fuels creativity and discovery. Our strategy is informed by the Wisconsin Idea: Research and education should influence people's lives beyond the boundaries of the classroom, lab, and campus.



DATA SCIENCE HUB

The Data Science Hub in the Wisconsin Institute for Discovery collaborates closely with the DSI to provide training and implement data science practices into research across campus. The Data Science Hub executes its mission of community engagement and learning opportunities for researchers across campus through a variety of services. The Data Science Hub hosts trainings and workshops around fundamental data science and computational skills, to help researchers learn to reproducibly write software and analyze data. It offers consultations with data science facilitators who can recommend learning pathways and project strategies and liaise contacts with collaborators and data science experts.

The Data Science Hub organizes seminars and events, including UW-Madison's annual Data Science Research Bazaar, where researchers and data scientists from different disciplines and industries have opportunities to share their work, collaborate, and discuss their data science interests.





SOCIAL

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linkedin: University of Wisconsin-Madison Information School (iSchool)

community map: maps.datascience.wisc.edu

SCHOOL OF COMPUTER, DATA & INFORMATION SCIENCES

The School of Computer, Data & Information Sciences (CDIS) was launched in 2019 and brings together the top-ranked departments of Computer Sciences, Statistics, and the Information School. CDIS is lighting the way forward for research and discovery, magnifying the power of medicine, engineering, agriculture, business, and more. CDIS is educating versatile, multi-talented graduates across all majors on campus—who form a uniquely prepared talent pipeline that is driving economic growth in the region and beyond. CDIS collaborates across campus, regionally, and nationally to produce cutting-edge, transformative research, educate leaders and critical thinkers, and accelerate innovation that tackles societal issues. Our departments are renowned for the groundbreaking research that our faculty, staff, and students do. From undergraduate and graduate degrees to certificates, professional development, and workshop opportunities, CDIS helps students earn the tech skills they need to be successful leaders and strategic thinkers in their fields.



OTHER DATA SCIENCE-FOCUSED ORGANIZATIONS AT UW-MADISON

Department of Biostatistics and Medical Informatics (BMI) advances data science for medicine and public health through collaboration with biomedical scientists.

Institute for Foundations of Data Science (IFDS), funded by NSF's TRIPODS program, focuses on fundamental, theoretical issues in data science. IFDS faculty are involved in applications-focused projects.

Machine Learning and Optimization Research Consortium (MOR) works with industry partners to solve machine learning and optimization challenges in data analytics, healthcare systems, manufacturing, transportation, and other commercial applications.

Machine Learning for Medical Imaging (ML4MI) fosters interdisciplinary collaboration between machine learning experts and medical imaging researchers in order to solve problems in medical imaging.

MADLab is a University Center of Excellence supported by the Air Force Office of Scientific Research and the Air Force Research Lab to develop the next generation of machine learning theory, algorithms, and applications.

Wisconsin Institute for Discovery (WID)'s expertise in data science spans disciplines, with the goal of developing end-to-end strategies for data collection, analysis, management, privacy, security, and decision-making.



The Data Science Ethos

A Structured Approach to Responsible Data Science

The Data Science Ethos was created by an interdisciplinary team of social scientists, humanists, and data scientists working with ADSA to **merge the data science research workflow with an ethical framework**.

The Data Science Ethos operationalizes the responsibilities of data scientists - conducting outcomes-based research that is grounded in a **thoughtful understanding of the human impacts and interactions of the work**.

It offers practitioners structured ways of thinking about the social and ethical contexts relevant to each stage of the data science research process.

WHAT IS AN ETHOS?

Ethos, the ancient Greek word that has become "ethic" in modern English, refers to the **spirit or character of a people**. As data scientists, we believe our ethos includes **considering the potential impacts of our work** on the world around us.

MORE THAN A CODE OF ETHICS

The Data Science Ethos helps learners and researchers **understand how to infuse ethics into their daily work** and **draw connections** from their data science work to the world around them.



DATA SCIENCE'S TRUE SPIRIT

The Data Science Ethos highlights what we believe to be data science's true spirit - namely to **provide insight about the world around us while centering ethical and responsible services, outcomes, and technologies**.

A COMMUNITY-ORIENTED FRAMEWORK

The creation of the Data Science Ethos tool was **prompted and supported by the academic data science community**. We want to know what you think about the tool, how you've used it for teaching and training, and how we can make improvements.



Learn More:
ethos.academicdatascience.org



SUMMARY

Data science at UWM is built on an inclusive vision. We believe you can apply this work and these skills to all facets of life, be it art, business, health, weather or countless other areas.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- MS in Data Science
- BS in Data Science
- BA in Data Analytics

PROGRAM STATISTICS

- Number of affiliated members: 45
- Number of students enrolled: 60

SOCIAL

email: datascience-degrees@uwm.edu

web: uwm.edu/data-science

LOCATION

3203 N Downer Ave #261
Milwaukee, WI 53211

PROGRAM OVERVIEW

Data science at UWM is built on an inclusive vision. We believe you can apply this work and these skills to all facets of life, be it art, business, health, weather or countless other areas. That's why our data science programs build an appreciation of these broad applications rather than concentrating solely on methods and techniques. The same vision guides how we approach research in data science.



THE NORTHWESTERN MUTUAL DATA SCIENCE INSTITUTE (NMDSI)

The NMDSI is a groundbreaking partnership between Northwestern Mutual, Marquette University and the University of Wisconsin-Milwaukee that contributes to the technology ecosystem and advances southeastern Wisconsin as a national hub for technology, research, business and talent development, while creating an organic pipeline of tech talent in the area.

Our vision is to be a world-class institute that transforms our world through the power of data science. We inspire and cultivate a passion for data science, galvanizing the brightest minds in the Milwaukee region to solve some of the world's most pressing problems and inspire the next generation of data scientists.



Data Science Institute

SUMMARY

The Vanderbilt Data Science Institute accelerates data-driven research, promotes collaboration, and trains future leaders. The institute brings together experts in data science with leaders in all academic fields to spark new discoveries. The institute educates students in data science to become leaders in industry, government, academia and the nonprofit sector.

ORGANIZATIONAL STRUCTURE

Cross-departmental Institute

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- Master of Science in Data Science
- Undergraduate Minor in Data Science

PROGRAM STATISTICS

- Number of faculty: 14
- Number of professional staff: 6
- Number of affiliated faculty: 224
- Number of students: 82

LOCATION

17th & Horton Building
1400 18th Ave S, Nashville, TN 37212

DATA SCIENCE EDUCATION

M.S. in Data Science - Our two-year data science degree boasts a customized data science-specific curriculum taught by an interdisciplinary faculty from Medicine, Engineering, Arts and Sciences, Education, and Business. Our program is 46% female and we are committed to enabling gender equality in data science. The Owen Graduate School of Management's highly-ranked Career Management Center supports our students' career goals. Our program is rigorous, practical, experiential, team-oriented, and student-focused. Our Data Science Team attracts a continual flow of real-world projects for students to participate in both in and out of the classroom. See our promo video at bit.ly/vanderbilt-data-science

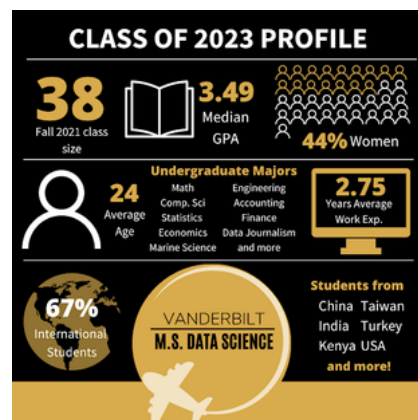
Data Science Minor - Vanderbilt's trans-institutional data science (DS) minor provides students of all disciplines an accessible and well-rounded foundation in DS, providing context and experience with the tools of our increasingly data-driven society.

This 19-credit hour interdisciplinary program covers foundational DS skills, from programming to statistics, interweaving

ethical considerations of data use and interpretation. With experiential learning opportunities, the minor provides a solid foundation for future professions or graduate study in any field that uses data.

INTERDISCIPLINARY WORK

At the DSI, we engage in projects across the academic and industry spectrum. From archaeology to medicine to literature, students have the opportunity to participate in new and ongoing collaborations, or to explore their own. Every Friday the DSI hosts AI Fridays, where researchers drop by for a Deep Dive, hour-long in-depth conversation with data scientists and faculty on a topic of interest. Recent Deep Dives have included using transformers to study special education classroom interactions and the application of AI in design and engineering problems in industry. Students have multiple opportunities to explore applications of data science. Our Masters students complete a self-directed Capstone project which is often in partnership with faculty in various disciplines or industry partners. In our Data Science for Social Good Programs, students have an opportunity to make a substantial contribution by applying data science skills, while gaining the opportunity to solve problems across a broad range of areas. Undergraduates can participate in the DSI Summer Research Program to pursue data science-related research with a faculty sponsor.





SOCIAL

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linkedin: Data Science Institute at Vanderbilt University

facebook: @vanderbiltdatascience

instagram: @vudatascience

PROFESSIONAL DATA SCIENCE EXPERIENCE

I have learned that communication is super important for a future data scientist. In the program we practice a lot on how to communicate, and now I understand that your team members all have the same goal - completing the project in the best way possible. It opens you up to different opinions and ideas.

Marina Yue

Bachelor of Arts
Statistics
University of Florida

 **VANDERBILT UNIVERSITY** | Data Science Institute
Discovery through data.

The Data Science Institute at Vanderbilt is actively engaged in data science projects and students are an integral part of those teams. As one of its core groups, the DSI has a professional data science team that engages with researchers, industry, and not-for-profits in a dozen or more projects annually. Each is run using agile processes and best practices. By building teams of staff data scientists, Masters students and undergraduates, the DSI is able to both support the development of cutting-edge tools and approaches, provide real-world experience, and give students experience in fully participating as a team member in a high-functioning data science team.

This emphasis on real-world experience and best practices of team data science is woven in throughout the curriculum. The Data Science in Practice class is now in its third year of teaching students that "Data Science is a Team Sport" with industry best practices using real-world corporate projects. Project classes allow for a focused semester-long team engagement while also introducing new tools.

INDUSTRY PARTNERSHIPS

The DSI is actively engaged with industry through consulting, collaborative data science projects, course-based projects, and capstones. Through its Data Science Team, the DSI provides consults on data science and AI solutions to industry ranging from new startups to multinational corporations. Partners include AllianceBernstein, AWS, Bridgestone, Asurion, The General Insurance, and others.

Students have an opportunity to participate in projects with direct impact on businesses by joining data science teams that tackle scoped projects with our partners. They apply what they've learned in classes while developing new skills that can only be developed working on a team in a business environment. By graduation, students have had the opportunity to work with multiple companies in a real-world team environment, and are ready to step into data roles and immediately contribute.





VCU

VIRGINIA COMMONWEALTH UNIVERSITY

SUMMARY

Data science at the Virginia Commonwealth University is decentralized across five schools and departments, with academic and research foci aligned with the host department disciplines. VCU is an urban public research institution dedicated to the success and well-being of our students, patients, faculty, staff and community.

ORGANIZATIONAL STRUCTURE

Data science at VCU is housed in multiple departments across campus

DEGREES, PROGRAMS, AND SPECIALIZATIONS

VCU offers a variety of undergraduate and graduate degrees and certificates spanning multiple disciplines. See the full list on the following page.

LOCATION

Richmond, VA

PROGRAM OVERVIEWS

VCU is an urban public research institution dedicated to the success and well-being of our students, patients, faculty, staff and community through real-world learning that furthers civic engagement, inquiry, discovery and innovation; research that expands the boundaries of new knowledge and creative expression and promotes translational applications to improve the quality of human life; interdisciplinary collaborations and community partnerships that advance innovation, enhance cultural and economic vitality, and solve society's most complex challenges; health sciences that preserve and restore health for all people, seek the cause and cure of diseases through groundbreaking research and educate those who serve humanity; and deeply ingrained core values of diversity, inclusion and equity that provide a safe, trusting and supportive environment to explore, create, learn and serve.





SOCIAL

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twitter: @VCU

linkedin: Virginia Commonwealth University

facebook: @VirginiaCommonwealthUniversity

DATA SCIENCE DEGREES AT VCU

- B.S. and M.S. in Computer Science with concentration in data science
- Ph.D. in Computer Science
- B.S. and M.S. in Mathematical Sciences with concentration in statistics
- Ph.D. in Systems Modeling and Analysis
- Masters of Decision Analytics
- M.S. in Information Systems with concentration in data science
- M.S. and Ph.D. in Biostatistics
- B.S. and M.S. in Bioinformatics
- Ph.D. in Integrative Life Sciences

DATA SCIENCE CERTIFICATES

- Post-Baccalaureate Graduate Certificate in Data Science
- Professional M.S. in Bioinformatics
- Post-Baccalaureate Graduate Certificate in Genomics Data Science
- Post-baccalaureate undergraduate certificate in statistics
- Graduate Certificate in Applied Statistics

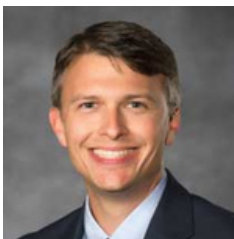


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KEY FACULTY CONTACTS



Paul Brooks
Department of
Information Systems



David Edwards
Department of
Statistical Sciences
and Operations
Research



Preetam Ghosh
Department of
Computer Science



Amy Olex
Wright Center
for Clinical and
Translational
Research



Michael Rosenberg
Center for Biological
Data Science



Shumei Sun
Department of
Biostatistics



Data Science and Programming Support Services

WAKE TECHNICAL COMMUNITY COLLEGE

SUMMARY

The Data Science and Programming Support Services program at Wake Tech prepares learners to design and develop desktop/web application with an emphasis on business logic and data-driven applications. Graduates will be proficient in Python, SQL, XML, database development, client/server-side JavaScript and Python, and will be able to support the software development needs of businesses in a wide variety of industries.

ORGANIZATIONAL STRUCTURE

The Data Science and Programming Support Services program is housed within the Information Technology Division

DEGREES, PROGRAMS, AND SPECIALIZATIONS

AAS, Data Science and Programming Support Services

PROGRAM STATISTICS

- Number of core faculty: 6
- Number of core professional staff: 2
- Number of affiliated members: 12
- Number of students enrolled: 262

SOCIAL

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web: it.waketech.edu

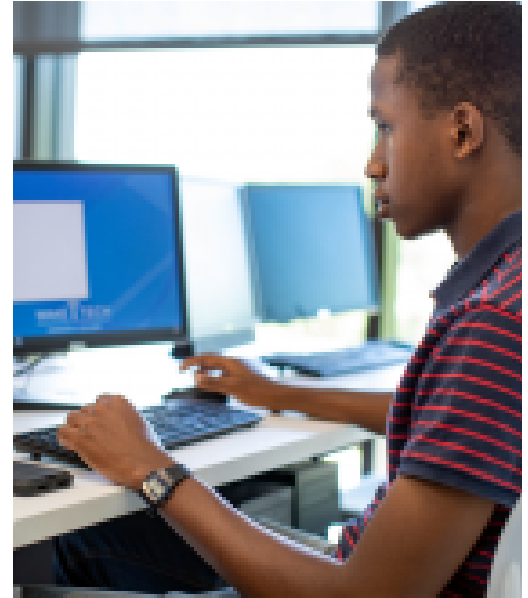
LOCATION

9101 Fayetteville Rd.
Raleigh, NC 27603

PROGRAM OVERVIEW

At Wake Technical Community College, our students who study Data Science and Programming Support Services are prepared for potential occupations including:

- Database Specialist
- Database Developer
- Programmer
- Software Developer
- Web Developer
- Programmer/Analyst
- Business Analyst
- Systems Analyst
- Software Trainer
- Software Tester
- Quality Assurance Specialist
- Technical Writer
- Database Developer



Students can further their education through articulation agreements with five colleges including NC Wesleyan University, Northeastern University, Shaw University, UNC Charlotte and Western Governors University.





WILLIAM & MARY

CHARTERED 1693

Data Science Program

SUMMARY

Data Science at William & Mary comprises academic offerings at the undergraduate and graduate level and a growing research portfolio. Through these activities we prepare students for careers that explore patterns in large data sets and identify potential trends and insights, and advance the state of science in this pursuit.

ORGANIZATIONAL STRUCTURE

Data Science is an autonomous unit within the Department of Computer Science

DEGREES, PROGRAMS, AND SPECIALIZATIONS

- B.S. (major and minor) in
- Data Science
 - Specializations in Data Applications, Algorithms, and Spatial Data Analytics
- Ph.D. in Data Science
- Graduate Certificate in Data and Computer Sciences

PROGRAM STATISTICS

- Number of Faculty: 10
- Number of core professional staff: 1
- Affiliated members: 12
- Number of students: 2022 graduating class was ~40; 2023 is expected to be ~50

LOCATION

P.O. Box 8795
Williamsburg, VA 23187-8795

PROGRAM OVERVIEW

The Data Science program at William & Mary is blending our tradition of liberal arts education with the highly technical issues at the core of the emerging data science academic domain to produce well-rounded, technically skilled graduates who also possess a deep understanding of the implications of big data and algorithms on our society. Accordingly, our offerings combine in-depth knowledge of highly technical subjects (e.g., Machine Learning, Programming) with additional broader curriculum requirements (ranging from courses related to the ethical aspects of the use of data to ones that address application-specific issues).



SOCIETAL IMPLICATIONS OF DATA SCIENCE: GOING BEYOND METHODS

Data Science at W&M provides a novel learning environment. We push students beyond methods and towards critically considering the implications of big data and algorithms on our society.

Topics in Data Science are constantly evolving, and so do our courses. Example issues drawn from previous coursework have included:

- How big data and algorithms are influencing sentencing in the legal system
- How algorithms choose - intentionally or not - who to save in a car crash
- How websites such as match.com are impacting the future of human genetics

SOCIAL

email: data-science@wm.edu

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twitter: [@WMdatascience](https://twitter.com/WMdatascience)



WINSTON-SALEM
STATE UNIVERSITY

*The Center for
Applied Data Sciences*

Center for Applied Data Science

WINSTON-SALEM STATE UNIVERSITY

SUMMARY

Founded in 1892, Winston-Salem State University is a public Historically Black College and University (HBCU) and a University of North Carolina (UNC) institution, where 76% of the student population are African Americans or Hispanic/Latino, 73% are female, and 23% are first generation college students.

ORGANIZATIONAL STRUCTURE

Cross-departmental Center

PROGRAM STATISTICS

- Number of Faculty: 1
- Number of technical staff: 3
- Affiliated Faculty: 6

LOCATION

Winston-Salem, NC, USA

PROGRAM OVERVIEW

The Center for Applied Data Science (CADS) at WSSU is an institution-wide initiative with the goal of fostering research and education in data-driven knowledge discovery. CADS aims to bring together computer scientists and domain scientists with complex Data Science problems to promote and accelerate data-intensive discovery and education. There are ongoing research projects in the areas of pharmacoengineering, mobile crowdsensing, spatial justice and social mobility, healthcare management, and music's biophysical influence on the human body. CADS also focuses on leveraging the power of data to help change lives and impact our local community, while also fostering greater diversity and inclusion in the rapidly growing field of data science. The center received its inaugural funding of 1.5M in the Fall of 2020 for three years funded by the UNC Research Opportunities Initiative (ROI). Currently, 30 faculty, students, and staff are supported by CADS under the leadership of Debzani Deb, the founding director of CADS.

FACULTY ADOPTER AWARDS

To better integrate data science into WSSU's full curriculum, the center started Faculty Adopter Awards, designed to support enthusiastic faculty across various disciplines who are willing to infuse data science into their courses, and are able to quantitatively and qualitatively assess the impact of their interventions. The FY '21 and '22 cohort of 10 awardees developed relevant course modules in data science and integrated them into existing courses in the Arts, Education, Mathematics, Sports Studies, Psychological Sciences, Justice Studies, and Healthcare Management. As part of this effort, 150 students received exposure to data analytics and gained hands-on experience using data science tools and techniques.

CADS RESEARCH PROJECTS

CADS focuses on interdisciplinary research and bridging the gap between domain experts and computer scientists to maximize the power and practicality of data science. Several current projects focus on healthcare disparities and the prominent factors that cause them, the application of mobile crowdsensing data to improve user experience, facility management, and resource usage; making therapeutic predictions by mining publicly available gene expression data, the impacts of different music genres on desired health outcomes, and exploring geographic, demographic, and socioeconomic variables to help communities address spatial injustices.



SOCIAL

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youtube: @CADSWSSU

DEGREES, PROGRAMS, AND SPECIALIZATIONS

CADS offers an interdisciplinary minor in data science, facilitates the gradual infusion of data science into the university-wide curriculum across diverse disciplines through Faculty Adopter Awards, supports existing graduate certificates in data analytics, and aims to offer a MS in Data Science in near future.

Through a joint effort of CADS and the Department of Computer Science at WSSU, a Data Science Minor is available to all WSSU students, beginning in Fall 2021. The Data Science Minor requires 6 courses (18 credit hours) – including 3 foundational courses in data science and statistics and 3 approved elective courses offered at various academic departments. Through participating in the minor, students will gain skills in data acquisition and management; data analysis; solving real-world data-based problems, interpretation and communication of data; and understanding the social and ethical implications of work in this field.

DEI AND OUTREACH

We expect that our various educational efforts and the research student mentorship efforts will expose women, minority, and underrepresented students to data science content and skills that may influence their choice about further education and future careers, therefore increasing the size and diversity of the future STEM workforce, and changing lives and communities for the better.

In fact, we plan to begin raising awareness of data science careers long before students even enroll at the university. The Center will contribute to K-12 outreach activities, including camps at local middle and high schools, to engage students and teachers in the possibilities of data science and how the field can be integrated into K-12 learning.



COMMUNITY COLLABORATION

While CADS' work is occurring in academic settings, the practical outcomes will have a lasting and far-reaching impact on the local community. We are eager to team with local businesses that might benefit from data science as they pursue investment and commercialization of their products. We also invite academia, industry, nonprofit, and government agency participation in our annual symposium and monthly seminars to increase awareness of data science. The Center gives us all a chance to do something very special together – prepare our young people for a bright future, improve lives through work that also bolsters the economy, and advance the cause of racial justice and equity throughout the Triad and North Carolina.

Coming in Summer 2023...

The ADSA - USRSE



Career Guidebook:

Hiring, Promoting, and Retaining Data Scientists and Research Software Engineers in Academic Settings

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\$2,000 - small logo on book and website, plus mention in the forward of the book

\$5,000 - large logo on book and website, plus mention in the forward of the book

Contact us at info@AcademicDataScience.org and let's discuss!

The **ADSA-URSE Career Guidebook** will serve as a reference for hiring managers and administrators on the motivation, means, and strategies for **building and sustaining successful research programs and rewarding career paths** for data scientists and research software engineers (RSEs).

WHY A CAREER GUIDEBOOK?

Data Scientist and Research Software Engineer positions are growing in academia. The changing nature of computing and research offers opportunities to recognize and support these new types of positions in research teams. Much of the guidebook is written for hiring managers, though elements are relevant to administrators, human resources employees, funding agencies, or data scientists and research software engineers themselves.

It also serves as a reference for data scientists and RSEs for how to best **engage in a productive and fulfilling career in data science or research software engineering.**



Learn More:

academicdatascience.org/career-guidebook



Data Science
Initiative
BROWN

Data Science Institute

BROWN UNIVERSITY

SUMMARY

Brown DSI's mission is to stimulate innovation and support people aspiring to improve lives in our data-driven world. We work with partners in all disciplines to promote data science research and education.

LOCATION

Box 1891
164 Angell Street, 3rd Floor
Providence, RI 02912-1891

PROGRAM OVERVIEW

Brown's Data Science Institute strives to:

- stimulate large-scale multidisciplinary research developing and applying data science methods to multiple data modalities
- educate all in data fluency and advanced applications of data science methods
- ensure that the power of data be leveraged toward a more equitable society via partnerships across campus and beyond.

SOCIAL

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twitter: @Brown_DSI
linkedin: Data Science Initiative, Brown University
facebook: facebook.com/DataScienceBrown



The Data Science Collaboratory

At Colgate University

SUMMARY

The collaboratory is a data analysis and collaboration network focused exclusively on smaller colleges and universities in New York State.

SOCIAL

email: datascience@colgate.edu
web: shiny.colgate.edu
twitter: @DataSciCollab

LOCATION

Case-Geyer Library
13 Oak Drive
Hamilton, NY 13346

PROGRAM OVERVIEW

The Colgate University Data Science Collaboratory was founded in 2018, with the goal of developing a vibrant research community among faculty and students. We aim to provide statistical guidance and resources to researchers across fields increasingly reliant on data science. Further, by incorporating students into the scientific community, they gain exposure to data science research and experience selecting, applying, and interpreting the results of appropriate techniques in various real-world contexts.

The Data Science Collaboratory is focused on three interconnected goals:

- Introduce emerging student scholars to data analysis across multiple disciplines.
- Cultivate a community of data science researchers and scholars across the Central New York region for mentorship and collaborative projects.
- Develop statistical tools that lower the barrier to and increase the quality of quantitative research.



HDSI | Harvard Data Science Initiative

PROGRAM OVERVIEW

The HDSI unites leading computer scientists, statisticians, and domain experts from law, business, public policy, education, medicine, public health, and myriad academic disciplines to derive meaningful and actionable insights that shape the new science of data. Its research drives data-driven policy and analyzes implications of big data for human society.

FOUNDATION | We build upon our bedrock of strength in computer science, statistics, and the liberal arts. In addition to data-driven research, we are fundamentally committed to data science education at all levels and across disciplines.

LENS | We work toward shaping the future of data-driven policy and the implications of big data for human society. We imbue all data-driven solutions with rigor, reproducibility, and contextual understanding.

ENVIRONMENT | We leverage Harvard's uniquely expansive network to connect cutting-edge technical expertise with deep domain knowledge across sectors including medicine, public health, law, business, and public policy. Our faculty generate data of incredible breadth and variety, creating arguably one of the richest data environments in the world.

SUMMARY

Representing Harvard's commitment to shaping the science of data. Illuminating the new interdisciplinary pathways that faculty, students, and partners use to solve real problems, in a world with critical challenges regarding facts, data, and truth.

SOCIAL

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linkedin: Harvard Data Science Initiative

facebook: @HarvardDataScience

LOCATION

8 Story Street Suite 380
Cambridge, MA 02138



LEHIGH

UNIVERSITY



I-DISC

INSTITUTE FOR DATA, INTELLIGENT
SYSTEMS, AND COMPUTATION

PROGRAM OVERVIEW

I-DISC builds upon the foundation of Lehigh research expertise in areas such as machine learning, optimization, probabilistic modeling, data-driven decision-making, high-performance & data-intensive computing, statistical signal and image processing, data representation & management, modeling & simulation, robotics & computer vision, business & management technology, and privacy & security.

As a research institute, I-DISC does not offer degrees. However, Lehigh offers related degrees including MS Data Science, MS Business Analytics, Undergraduate Minor in Data Science, and Certificates in Business Analytics, Data Science & Financial Analytics, Data Analytics and Data Science.

We offer lectures, seminars, workshops and conferences throughout the year to further promote I-DISC's mission. These include faculty forums, coding retreats, grant-writing workshops, and networking events.

SUMMARY

The Institute for Data, Intelligent Systems, and Computation (I-DISC) brings together scholars from across Lehigh University with an interest in computationally focused research.

SOCIAL

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web: idisc.lehigh.edu

twitter: @LehighDISC

linkedin: Institute for Data, Intelligent Systems & Computation (I-DISC)

LOCATION

Bethlehem, PA



UC SANTA BARBARA

Bren School of Environmental Science & Management

MASTER OF ENVIRONMENTAL DATA SCIENCE

SUMMARY

The Master of Environmental Data Science (MEDS) is a professional degree program at UCSB. The 11-month program trains environmental professionals in data science skills.

SOCIAL

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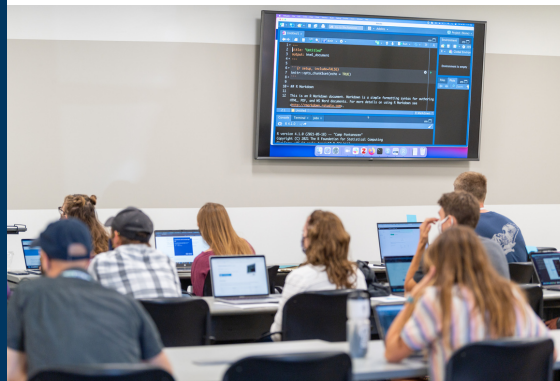
web: bren.ucsb.edu

LOCATION

Santa Barbara, CA

PROGRAM OVERVIEW

Coursework includes scientific programming, machine learning, remote sensing, spatial analysis, data visualization and more. The program ends with a 6-month group Capstone project. These projects are proposed by clients with a need for data science solutions to solve their environmental problems or answer environmentally-related questions.



WASHINGTON STATE UNIVERSITY

SUMMARY

WSU's Data Science program provides training in concentrated domain knowledge, advanced statistical, data, and computer science skills. This combination enables WSU graduate to effectively work in teams and easily communicate with colleagues and managers to solve problems.

SOCIAL

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instagram: @dataanalytics.wsu

LOCATION

915 N. Broadway
Everett, WA 98201

PROGRAM OVERVIEW

Data analytics is a multi-disciplinary field of study, comprising mathematics, statistics, computer sciences, and the study of data itself. The growing industry of data science has specialties in a plethora of topics, including actuarial sciences, agriculture and environmental systems, business, computation, data visualization, economics, and other sciences like life science, physical, and social sciences.

WSU understands the need for data analytics majors in the growing field and prepares them for success with outcomes such as the understanding of data in theory and practice, context and domain of data, and the methods and application of data. The recognition of professional data analyst responsibilities, legal and ethical obligations involving security and privacy, and principles of data use are studied in this degree. Graduates will be able to communicate their knowledge and function in academic and professional contexts while being able to be both a member and a leader of a team.

We would like to thank the following additional Member Institution:

- Carnegie Mellon University
- Saint Petersburg College

We would also like to thank our individual ADSA members, representing the following institutions:

- Ben Gurion University
- California Institute of Technology
- Ramapo College of New Jersey
- University of California, Riverside

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