



# Artificial Intelligence / Machine Learning Researcher Janice Garvey (she/her)

*"My interest is not just in the technology, but in understanding gaps in healthcare, developing a model, and following it through to implementation."*

## Bio

Janice Garvey was hired as an Assistant Professor to conduct research on Artificial Intelligence and Machine Learning (AI/ML) and automation techniques, and to improve the understanding and implementation of AI/ML technology at the academic medical center. She frequently works within cross-disciplinary teams to help clinical researchers address AI/ML challenges. At any given point, she is working with four to seven research groups, suggesting design and implementation plans for various AI/ML needs while simultaneously researching ways to improve AI/ML capabilities. To help manage this workload, she partners with graduate students from an affiliated school's department of data science. Because her work relies on effective collaborations, she also advocates for more cross-disciplinary networking and team science practices within the medical center. Her research is accompanied by a significant administrative burden, including mentorship, supervision and project management.

**Education:** BS Computer Science, MS Computational Biology, PhD Machine Learning

**Years of experience:** Two years as a postdoc, five years in the current position

**Work location:** Hybrid (office and remote work on laptop)

## Goals

- Improve models used in AI/ML research
- Develop best practices for implementing HIPAA compliant AI/ML technology in clinical practice
- Create a collaborative community of AI/ML experts and medical researchers

## Software attitude & use

- On the cutting edge of technology development and implementation
- Comfortably self-studies and learns new software and technologies
- Relies on high-performance computing
- Shares code on GitHub
- General: Microsoft Office Suite and Google Workspace
- Collaboration: Box, Slack, Zoom
- Specialized resources include Jupyter notebooks, Python and other languages, funder websites

## Outputs

- Scholarly articles in AI/ML journals
- Implementation of AI/ML tools in support of clinical decision support
- Presentations at computer science and medical research conferences
- Successfully trained research assistants

## Pain Points

- Difficulty retaining grad students and colleagues due to the competitive hiring environment, especially from industry, for hiring AI/ML experts
- Dependable access to high performance computing tools
- Working with messy real-world data
- Locating and gaining access to data for use in the creation of models, particularly as many researchers do not currently share their data

## Motivators

- Making a difference in clinical research and practices with AI/ML improvements
- Investigating real-world implications of AI/ML technologies
- Mentoring students with an approach to AI/ML that is based on real-world data and needs

## Wants/Needs

- A strong sense of community with other researchers and clinicians
- Fulfilling engagement in a variety of research areas
- Continued collaboration with and mentorship of graduate students in computer science, data science, and AI/ML
- Continued growth of available high performance computing technology and resources at the institution
- Robust and diverse data sets to support her research objectives and interests
- Publications and grant awards for promotion and tenure

## Professional Development

Janice presents her research to audiences in AI and medical research conferences as keynote speaker

Janice continually improves her social media communication skills to create viral stories about her research and promote her work to the outside world

Janice wants to take coaching and leadership courses to become a leader in her institution