

# STUDENTS AND COMMUNITY PARTNERS NAVIGATING FOOD INSECURITY... MANY DATA POINTS AT A TIME

## Georgia State University Library's Public Interest Data Literacy (PIDLit) Learning Lab Course

### PUBLIC INTEREST DATA LITERACY (PIDLit) LEARNING LAB

A two-semester course that connected students with community partners to **IDENTIFY DATA-DRIVEN SOLUTIONS FOR TACKLING FOOD INSECURITY** in the metro-Atlanta area and other sites in Georgia.

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### BUILDING RELATIONSHIPS WITH COMMUNITY PARTNERS

- PIDLit Directors conferred on how many partners, which partners, etc.
- PIDLit Co-Director Ashley reached out to multiple potential partners.
  - Multiple methods of outreach depending on the partner (email, phone calls, social media DMs, introductions via mutual connections).
  - Needed to overcome distrust from past "partnerships".
- Initial intention was to secure 5 partners but ended up with 4 (and 2 fell through - one defunct, other couldn't accommodate data collection activities).
- LOTS of emails and multiple meetings to wrangle partner commitment, data needs, guest talks in classes, attendance at final presentations, etc.



It is important to compensate our partners especially those who are from underserved populations. Historically, academics have benefited from studying underserved communities without providing equal recompense to the community. By paying our partners for their knowledge and time, we ensure that at the bare minimum they are monetarily compensated for their crucial work.

**\$PARTNER COMPENSATION\$**  
written into grant

Cultivating meaningful and equitable community partnerships is crucial to the success of the PIDLit Lab; thus, we will not just work on mutually-planned data projects that will benefit our community partners' missions but also monetarily compensate them for the expertise and time they share with our team and students. Before the course begins, we will host listening sessions with our partners to ensure the course is mutually beneficial, and throughout the course we will have feedback exchange sessions in which the partners will guide the data product development and associated deliverables to ensure they meet their desired outcomes from the partnership.

### LEARNING ACTIVITIES OUTSIDE OF CLASS TIME

- EXAMPLE OUT-OF-CLASS LEARNING ACTIVITIES
- SAS 2: Data Analysis (IN-PERSON)
  - Three Minute Thesis (3MT) Competition - Final Round
  - Introduction to Canva (ONLINE)
  - Panther's Pantry Tour
  - Canva for Multi-Media Presentations (ONLINE)
  - Intro to Power BI for Data Visualization (IN-PERSON)
  - Public Health Research Day Conference



### PARTNER FEEDBACK = POSITIVE!

"We recognize the listening, reflection, and professional skills that are taught to the students that extend beyond the topics that are covered in traditional research courses. At Wholesome Wave Georgia, the practice of these skills makes us feel as if our time is valued and that students are learning the critical skills needed to meaningfully engage with real-world data. This partnership provided a unique opportunity for us as a small organization that cannot currently code our focus groups. Our student partners took the time to meet with our team and then tackle some of the more time-intensive and valuable analyses of our qualitative data, strengthening our understanding of our programming and validating our upcoming programmatic changes."

- Abigail Darwin, Wholesome Wave Georgia  
Food For Health Manager



### STUDENT FEEDBACK = POSITIVE!

"I think a lot of new possibilities opened up for me. I have always seen myself as a humanities kind of person who ought to be scared of numbers, but the two go hand-in-hand and I am not afraid of pursuing things that require quantitative reasoning. I am excited to keep learning about data because I really can see a future for myself in data science now...I have already brought up this class and the research, qualitative and quantitative data analysis skills, and software program skills I have learned in interviews I had last week."

#### STUDENT ACCOLADES!

- 2 Outstanding Undergraduate Awards
- 1 Community Service Award
- 1 Scholarship for Grad School
- 1 got a JOB conducting research!



### APPLIED RESEARCH – QUANTITATIVE / STATS PRACTICE

- DATA DIVE – PIVOT TABLES:** Used Google sheets to examine Current Population Survey (CPS) December 2021 Food Security Supplement data:
- ✓ Created bivariate pivot tables of raw counts/% & charts to visualize table data
  - ✓ Interpreted results from pivot tables in relation to research questions
- DATA DIVE – STATISTICAL ANALYSIS IN SPSS:** Used skills learned from in-class exercises and SPSS Ready! Badge training to explore GSU Student Food Insecurity Survey data:
- ✓ Conducted univariate / descriptive statistics on two dichotomous variables (living in campus housing & easy access to healthy food)
  - ✓ Conducted crosstabs and Chi-Squared tests to examine association between the two dichotomous variables



"As college students, we take all of these classes and most times there isn't a way to show that you can apply what you've learned. Being able to display that I'm data literate as a sociology student is important as a graduating senior. Knowing where to learn and earn a badge for SPSS, SAS, NVIVO, etc. is valuable ..."

### APPLIED RESEARCH – FOOD INSECURITY SURVEYS

GSU STUDENTS (N=424)

PUBLIC TRANSPORT USERS (N=115)

**Food Insecurity at GSU**

Georgia State University  
Informed Consent

Title: Evaluating Food Insecurity among Georgia State University Students

Principal Investigator: Halley E.M. Riley, PhD, MPH  
Co-Investigator: Ashley M. Rockwell, MA, Mandy-Swygart-Hobaugh, PhD  
Sponsor: New Venture Fund

**Purpose**  
The purpose of the study is to learn more about food insecurity among GSU students. Food insecurity is the lack of consistent access to enough food for a person to live a healthy lifestyle. If you do not wish to take part in this study, you do not have to participate. We invite you to take part in this research study because you are a GSU student. We will invite 400 students to be in this study.

**Procedures**  
If you decide to take part in this study, you will complete a one-time survey. The survey will take about 15-20 minutes to complete. The survey will be confidential, meaning no one will know how you answer the questions. You can do the survey on your own device (e.g., smart phone or computer) in a private place. We will ask you questions about your experiences with food insecurity, any effects of not having enough healthy food that you have experienced, any barriers to eating healthy that you have experienced, and some personal information about you.

Georgia State University  
Informed Consent

Title: Evaluating Food-Related Needs among Current and Potential MARTA Market Customers

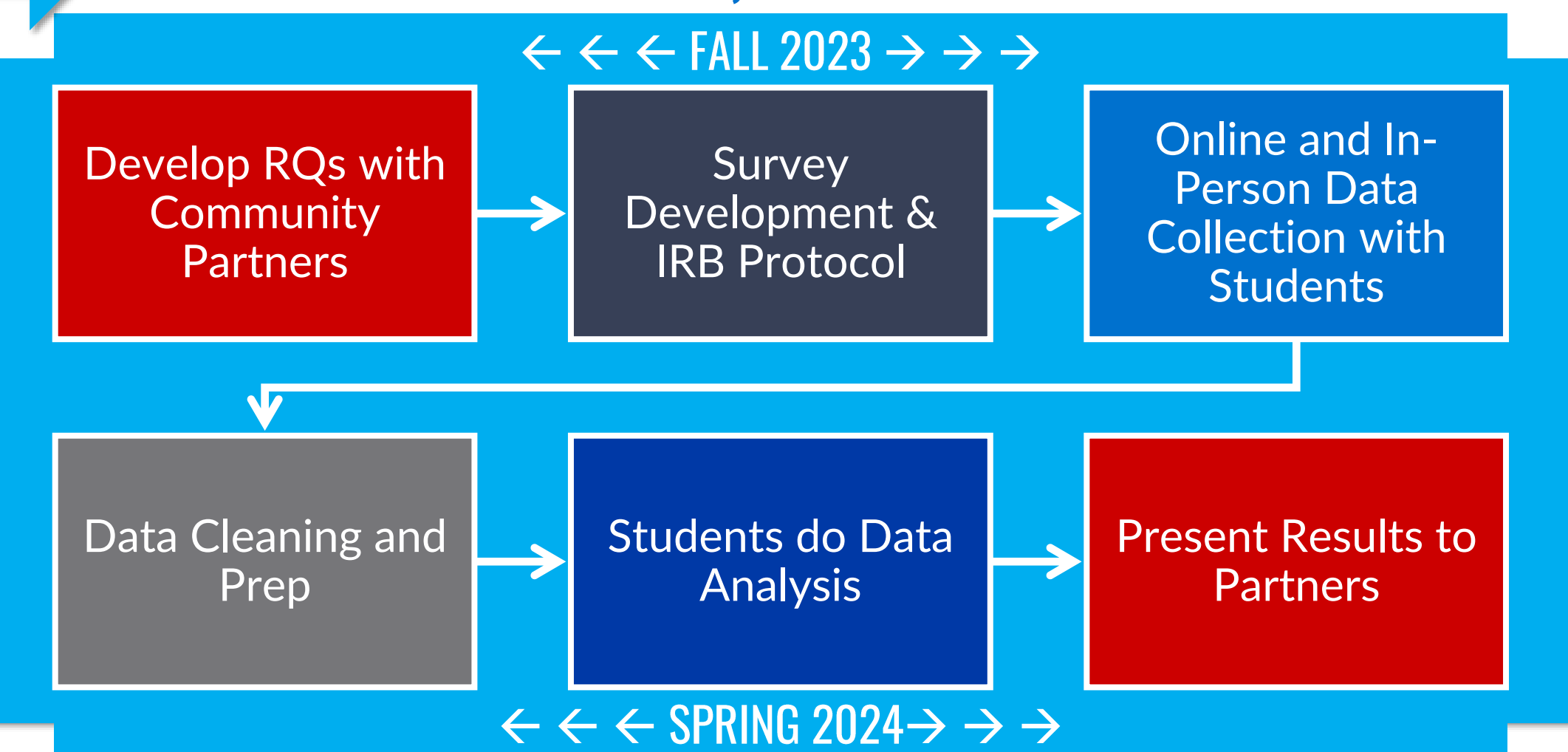
Principal Investigator: Mandy-Swygart-Hobaugh, PhD  
Co-Investigator: Halley E.M. Riley, PhD, MPH  
Ashley M. Rockwell, MA

Sponsor: New Venture Fund

**Purpose**  
The purpose of the study is to learn more about food-related needs among current and potential MARTA Market customers. If you do not wish to take part in this study, you do not have to participate. We invite you to take part in this research study because you are at a MARTA Market station. We will invite 100 people to be in this study.

**Procedures**  
If you decide to take part in this study, you will complete a one-time survey. The survey will take about 15-20 minutes to complete. The survey will be confidential, meaning no one will

### DEVELOPED SURVEYS, FROM START TO FINISH!



### APPLIED RESEARCH – QUALITATIVE CODING PRACTICE

- MANUAL CODING:**
- ✓ Independently coded interview excerpts for themes
  - ✓ Compared coding for common/divergent themes
- DATA DIVE – CODING IN NVIVO:**
- ✓ Used skills learned from in-class exercises and NVivo Ready! Badge training to explore Wholesome Wave Georgia focus group interviews:
  - ✓ Explored pros/cons of NVivo's automated features (word frequency queries and auto coding by theme) for finding themes in data
  - ✓ Manually coded (in NVivo) to compare using your mind vs the machine to gain insights from qual data

"I had an understanding of what qualitative research methods are before this class, but I didn't understand the process of coding the data."

### APPLIED RESEARCH – THE FINAL DATA PRODUCTS

- Used both qualitative and quantitative skills to develop research questions (RQs), conduct data analyses, and communicate findings to community partners.
- ✓ 5 RQs - Descriptive (2), Inferential (1), and Qualitative (2)
  - ✓ Create data product (policy memo, one-pager, infographic) & presentation.

### FINAL DATA PRODUCTS – EXAMPLES:

GSU Students	Frequency	Percent
Not Exp. Food Insecurity	172	40.6%
Experiencing Food Insecurity	252	59.4%
Total (N)	424	100%

### APPLIED RESEARCH – FOCUS GROUPS PROGRAM EVAL

WWG SITE 1 – ATHENS (N=3)

WWG SITE 2 – AUGUSTA (N=6)

WHOLE SOME WAVE GEORGIA | FOCUS GROUP | ATHENS PROGRAM  
PARTICIPANTS | Complete Transcript 01:24:41

**Contents**

- WHOLE SOME WAVE GEORGIA | FOCUS GROUP | ATHENS PROGRAM 1
- PARTICIPANTS | Complete Transcript 01:24:41 1
- ICEBREAKER – FAVE NEW VEGGIE OR RECIPE 1
- LIKE BEST 1
- LIKE LEAST 3
- CHANGES TO EATING OR SHOPPING 8
- CHANGES TO EATING OR SHOPPING 8
- BARRIERS TO PROGRAM PARTICIPATION & SUSTAINING CHANGES 11
- STAYING CONNECTED 13
- ADVICE TO NEXT COHORT 14
- MENTAL HEALTH 15
- MOST SIGNIFICANT CHANGE 16
- ANYTHING ELSE TO SHARE 18

WHOLE SOME WAVE GEORGIA | FOCUS GROUP | AUGUSTA PROGRAM  
PARTICIPANTS | Complete Transcript 01:00:08

**Contents**

- WHOLE SOME WAVE GEORGIA | FOCUS GROUP | AUGUSTA PROGRAM 1
- PARTICIPANTS | Complete Transcript 01:00:08 1
- ICEBREAKER – FAVE NEW VEGGIE OR RECIPE 1
- LIKE BEST 2
- LIKE LEAST 3
- CHANGES TO EATING OR SHOPPING 8
- CHANGES TO EATING OR SHOPPING 8
- SOCIAL CONNECTIONS 9
- MENTAL HEALTH 11
- BARRIERS TO PROGRAM PARTICIPATION & SUSTAINING CHANGES 12
- STAYING CONNECTED 13
- MOST SIGNIFICANT CHANGE 16
- ANYTHING ELSE TO SHARE 18

[conducted by Wholesome Wave Georgia (WWG); students analyzed transcripts]



Funded by the New America Public Interest Technology University Network (PIT-UN) Challenge Fund.







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### ABSTRACT

Poster gives an overview of the two-semester experiential-learning course designed and taught in the Fall 2023 and Spring 2024 by Research Data Services (RDS) faculty from the Georgia State University Library's Public Interest Data Literacy (PIDLit) grant-funded initiative (<https://lib.gsu.edu/pidlit>). The "Tackling Food Insecurity" PIDLit Learning Lab connected students with partner organizations to apply data skills to address the real-world problem of food insecurity. The poster: (1) gives a brief overview of the course content and array of assignments, (2) details the partner-driven data collection, analysis, and reporting activities in which students engaged, (3) highlights the successes, the challenges, and the lessons learned for future course offerings, and (4) facilitates discussion with poster attendees regarding the benefit of others considering developing and teaching similar applied experiential-learning courses.

### Public Interest Data Literacy (PIDLit) Learning Lab

A two-semester course that connected students with community partners to IDENTIFY DATA-DRIVEN SOLUTIONS FOR TACKLING FOOD INSECURITY in the metro-Atlanta area and other sites in Georgia. Funded by the New America Public Interest Technology University Network (PIT-UN) Challenge Fund (<https://pitcases.org>)



## Building Relationships with Community Partners

- PIDLit Directors conferred on how many partners, which partners, etc.
- PIDLit Co-Director Ashley reached out to multiple potential partners.
  - Multiple methods of outreach depending on the partner (email, phone calls, social media DMs, introductions via mutual connections).
  - Needed to overcome distrust from past "partnerships".
- Initial intention was to secure 5 partners but ended up with 4 (and 2 fell through – one defunct, other couldn't accommodate data collection activities).
- LOTS of emails and multiple meetings to wrangle partner commitment, data needs, guest talks in classes, attendance at final presentations, etc.
- **NOTE:** We wrote \$\$PARTNER FINANCIAL COMPENSATION\$\$ into our grant:

**EXCERPT from grant:** "It is important to compensate our partners especially those who are from underserved populations. Historically, academics have benefited from studying underserved communities without providing equal recompense to the community. By paying our partners for their knowledge and time, we ensure that at the bare minimum they are monetarily compensated for their crucial work...Cultivating meaningful and equitable community partnerships is crucial to the success of the PIDLit Lab; thus we will not just work on mutually-planned data projects that will benefit our community partners' missions but also monetarily compensate them for the expertise and time they share with our team and students..."

## Applied Research – Food Insecurity Surveys

To provide hands-on data collection and analysis experiences for our students, we created and administered two survey research studies examining food insecurity experiences among participants: (1) one focused on Georgia State University (GSU) students with 424 total participants; (2) another of Atlanta's MARTA public transportation users with 115 total participants. We chose to focus on these populations based on feedback from our community partners, Panther's Pantry and MARTA.

## Developed Surveys, From Start to Finish!

A flowchart depicts our general research process, moving from initial meetings with our community partners to develop research questions through survey development, data collection and data cleaning, all so we could create applied research opportunities for our students and generating research findings to help our partners with their work. This was a time- and labor-intensive endeavor, and some steps, like data cleaning, took longer than we initially anticipated.

### FLOW CHART:

**FALL 2023:** Develop RQs with Community Partners → Survey Development & IRB Protocol → Online and In-Person Data Collection with Students → **SPRING 2024:** Data Cleaning and Prep → Students do Data Analysis → Present Results to Partners



### Applied Research – Focus Groups Program Evaluation

To satisfy research interests of a third partner, Wholesome Wave Georgia, we asked one question on each survey about awareness and use of their Fresh for Less program, which doubles SNAP benefits at farmers markets. Additionally, we received transcripts from 2 focus groups conducted by Wholesome Wave Georgia to evaluate their Food for Health program, a program in which qualifying participants redeem fresh-produce food prescriptions at farmers markets and take part in cooking and wellness education classes.

### Applied Research – Quantitative / Stats Practice

Activities to develop quantitative / statistical analysis skills in preparation for the final project data analyses included:

1. Used Google sheets to examine Current Population Survey (CPS) December 2021 Food Security Supplement data: Created bivariate pivot tables of raw counts/% and charts to visualize table data; Interpreted results from pivot tables in relation to research questions.
2. Used skills learned from in-class exercises and SPSS Ready! Badge training to explore GSU Student Food Insecurity Survey data: Conducted univariate / descriptive statistics on two dichotomous variables (living in campus housing & easy access to healthy food); Conducted crosstabs and Chi-Squared tests to examine association between the two dichotomous variables
3. Earned Data Viz Ready! Badge, Data Ready! Badge, and SPSS Ready! Badge.

**QUOTE from student:** “As college students, we take all of these classes and most times there isn’t a way to show that you can apply what you’ve learned. Being able to display that I’m data literate as a sociology student is important as a graduating senior. Knowing where to learn and earn a badge for SPSS, SAS, NVIVO, etc. is valuable...”

### Applied Research – Qualitative Coding Practice

Activities to develop qualitative coding analysis skills in preparation for the final project data analyses included:

1. Manually coded a printed transcript of a person who had experienced food insecurity in their childhood-to-young-adulthood: Independently coded interview excerpts for themes; Compared coding for common/divergent themes.
2. Hand-sorted printed cutouts of qual answers to food insecurity surveys into themes; consolidated into categories and themes; tallied in Excel.
3. Used skills learned from in-class exercises and NVivo Ready! Badge training to explore Wholesome Wave Georgia focus group interviews: Explored pros/cons of NVivo’s automated features (word frequency queries and auto coding by theme) for finding themes in data; Manually coded (in NVivo) to compare using your mind vs the machine to gain insights from qual data
4. Earned NVivo Ready! Badge.

**QUOTE from student:** “I had an understanding of what qualitative research methods are before this class, but I didn’t understand the process of coding the data.”



## Applied Research – The Final Data Products

Used both qualitative and quantitative skills to develop research questions (RQs), conduct data analyses, and communicate findings to community partners:

- 5 RQs – Descriptive (2), Inferential (1), and Qualitative (2)
- Create data product (policy memo, one-pager, infographic) & presentation – see final data products at <https://lib.gsu.edu/PIDLitstudentwork>

**GROUP 1 – MARTA User Survey – RQs:** (1) % receive SNAP benefits? (2) % current MARTA Markets users satisfied with hours? (3) Association b/t receiving SNAP and using MARTA Markets? (4) What food items do MARTA users want Markets to offer? (5) Similarities/differences b/t current Market users and non-users re: desired food items?

**GROUP 2 – MARTA User Survey – RQs:** (1) % MARTA Markets users by gender? (2) Satisfaction with MARTA Markets food quality, variety, display, and operation hours, days, seasons, and locations? (3) Association b/t gender and satisfaction with MARTA Markets? (4) What factors would increase MARTA Markets use? (5) What factors would increase MARTA Markets awareness?

**GROUP 3 – WWG Focus Groups – RQs:** Survey Data (MARTA users), (1) % heard of/used Fresh for Less program? (2) % don't know how to make healthy meals? (3) Association b/t food insecurity and Fresh for Less use? WWG Focus Groups Data, (4) Food for Health program changed Ps behaviors or feelings towards food? (5) Barriers Ps experience w/ Food For Health program participation?

**GROUP 4 – GSU Student Survey – RQs:** (1) % missed/dropped class due to food insecurity? (2) % stressed/low energy due to food insecurity? (3) Association b/t level of food insecurity and health effects of food insecurity? (4) Food sensitivities impact use of Panther's Pantry? (5) What food items do students want Panther's Pantry to offer?

**GROUP 5 – GSU Student Survey – RQs:** (1) % food insecure? (2) % households w/ kids + food insecure? (3) Association b/t being food insecure & housing status? (4) What non-food items do students want Panther's Pantry to offer? (5) To what extent are students asking for non-food items that Panther's Pantry already offers?

## Learning Activities Outside of Class Time

Students were required to engage in additional hands-on learning activities outside of the regular class time, such as:

1. Volunteering at or touring food-insecurity organizations in Atlanta, including food sorting at Atlanta Community Food Bank, meal prep at Open Hand Atlanta, and a facility tour of the campus-serving Panther's Pantry.
2. Conducting in-person recruitment of survey participants on the downtown GSU campus and at MARTA train stations.
3. Attending additional data analysis training workshops like SAS for data analysis and Tableau, Power BI, and Canva for data visualization.
4. Attending Symposiums at which academic research was presented.



### Partner Feedback = POSITIVE!

**Quote from partner:** "We recognize the listening, reflection, and professional skills that are taught to the students that extend beyond the topics that are covered in traditional research courses. At Wholesome Wave Georgia, the practice of these skills makes us feel as if our time is valued and that students are learning the critical skills needed to meaningfully engage with real-world data. This partnership provided a unique opportunity for us as a small organization that cannot currently code our focus groups. Our student partners took the time to meet with our team and then tackle some of the more time-intensive and valuable analyses of our qualitative data, strengthening our understanding of our programming and validating our upcoming programmatic changes." ~ Abigail Darwin, Wholesome Wave Georgia Food For Health Manager

[see more quotes from partners at <https://lib.gsu.edu/PIDLitstudentwork>]

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**Quote from student:** "I think a lot of new possibilities opened up for me. I have always seen myself as a humanities kind of person who ought to be scared of numbers, but the two go hand-in-hand and I am not afraid of pursuing things that require quantitative reasoning. I am excited to keep learning about data because I really can see a future for myself in data science now...I have already brought up this class and the research, qualitative and quantitative data analysis skills, and software program skills I have learned in interviews I had last week."

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### Student Accolades!

- 2 Outstanding Undergraduate Awards
- 1 Community Service Award
- 1 Scholarship for Grad School
- 1 got a JOB conducting research!