Mira Flynn

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PROJECTS

National High Injury Network Analysis Tool | *Python, Flask, SQL, AWS, NumPy, Pandas* September 2022 – May 2023
- Worked in a team of 5, using an Agile development process
- Developed a full-stack web application using Flask interfacing with an AWS database
- Researched user needs and designed an application to fulfill them
- Developed an algorithm using OSMnx (OpenStreetMap data), NumPy, Pandas, SciPy, and Shapely to find the most dangerous roads in an area
- Proved the value of the application, and handed work off to the Volpe Center at US Department of Transportation for further development

EXPERIENCE

Data Analytics and Management Intern June 2022 – August 2022
Pfizer
- Investigated the business uses of project management data
- Developed a dashboard using Spotfire and Python to highlight important characteristics of the project portfolio
- Processed and visualized data to highlight important aspects for easy identification by project portfolio managers
- Discovered situations where business necessities override other characteristics in choosing software tools

Teaching Assistant- **Data Science, Astronomy and Statistics** September 2021 – May 2023
Olin College of Engineering Needham, MA
- Assisted in teaching probability and statistics, programming in R and Python, and effective visual communication of information
- Graded assignments and assisted students with questions and topics they were confused about
- Helped students work through project roadblocks and assisted in scientific writing about their projects

Researcher - Qualitative Interview-Based Research June 2021 – August 2021
Olin College of Engineering Needham, MA
- Worked with Professor Zach del Rosario to research how engineers process uncertainty in data
- Interviewed engineering students using an IRB-approved protocol
- Developed and applied a formal interview coding protocol
- Co-authored "A Qualitative Study of Engineering Students' Reasoning About Statistical Variability" (2021, Under Review)

Researcher - Shared Mobility Systems June 2020 – August 2020
Olin College of Engineering Needham, MA
- Worked with Professor Alice Paul and City of Providence to research equity in their shared mobility systems
- Used R to model system demand and usage patterns, and data analysis techniques including linear regression, decision trees, and several clustering algorithms to compare those patterns to demographic data
- Used Shiny and Leaflet packages to create an application to visualize and explore our model output
- Discovered systemic inequities and offered insight into how the shared mobility systems could better serve the city as a whole

EDUCATION

Olin College of Engineering August 2019 – May 2023
Bachelor of Science in Engineering: Computing Needham, MA
Recipient of 50% Tuition Merit Scholarship

Selected Coursework: SCOPE (Senior Capstone Program in Engineering), Technology, Accessibility, and Design, Probabilistic Modeling, Astronomy and Statistics, Principles of Integrated Engineering, Discrete Math, Computer Architecture, Complexity Science, Software Systems, Engineering Systems Analysis, Quantitative Engineering Analysis, Foundations of Computer Science, Data Science, Microelectronic Circuits, Modeling and Simulation

TECHNICAL SKILLS

Programming Languages: Python, R, SQL, Arduino, MATLAB, JavaScript, HTML, PHP, OCAML, C
Developer Tools: Git/GitHub, Amazon Web Services (AWS), VS Code, RStudio, Spotfire, Alteryx, Jira
Libraries: NumPy, Pandas, GeoPandas, SciPy, OSMnx, Shapely, Matplotlib, Flask, Tidyverse, R Shiny, Leaflet
General Skills: Computer Science, Software Development, Data Science, Documentation, Attention to Detail, Verbal and Written Communication, Collaboration, Creativity, Continuous Learning, Analysis, Problem Solving, Time Management