### SOPHIA RUTMAN

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#### **EDUCATION**

Georgetown University, Washington D.C

MS in Data Science and Analytics

May 2026

Involvements: DataKind DC, Code the Curb, Athletic Events Operations Aid

**Relevant Coursework**: Data Science and Analytics (Python, HTML, CSS, JavaScript); Probabilistic Modeling and Statistical Computing (R); Database Systems and SQL (SQL); Advanced Data Visualization (Python, R, D3.js, Tableau); Neural Networks and Deep Learning (Python); Statistical Learning (Python, R)

Bowdoin College, Brunswick, ME

May 2024 GPA: 3.796

BA in Computer Science and Physics

Involvements: Varsity Field Hockey (Captain), Varsity Women's Lacrosse (Goalie), Sports Information Aid

Relevant coursework: Artificial Intelligence (Python); Financial Machine Learning (Python); Operating Systems (C++); Software Engineering (Java, AngularJS, HTML, JavaScript, CSS); Statistical Physics

### EXPERIENCE

## VolunteerMatch, Washington, DC, USA

September 2024 - Present

Volunteer Data Analyst

- Participated in the DataKind DC Datathon with VolunteerMatch, analyzing correlations between volunteer opportunities posted and their respective sign-up rates
- Processed 72,000+ volunteer descriptions and engineered features (description length, POS tags, sentiment, keywords, n-grams) with Pandas, NumPy, Scikit-Learn, and NLTK
- · Conducting EDA to uncover insights on optimizing opportunity descriptions to boost volunteer sign-ups

## Independent Study, Bowdoin College, Brunswick, ME, USA

August - December 2023

Student Researcher

- Published work under Professor Sarah Harmon utilizing data annotation relating to the effectiveness of LLMs in predicting a character's next decision in a film on over 200 pieces of data
  - Presented study (<u>Prompt Generation for Narrative Choice Generation by Sarah Harmon and Sophia Rutman</u>) in the International Conference for Interactive Storytelling in November 2023
- Formulated a survey in a second project where users chose haptic feedback that would best fit a particular story, to be distributed using Amazon's Mechanical Turk

### Paramount Global - Pluto TV, Los Angelos, CA, USA

June - November 2023

Software Test Engineer Intern

- · Leveraged a pre-existing code base to aid in code cleanup before deployment of a new feature on all devices
- Refactored 10 methods based on how new feature changed app navigation using Java and Selenium
- · Validated functionality with Tizen, LG, and SmartCast devices using regression testing
- · Created Jira tickets, my own Git branches, and 8 Pull Requests to collaborate with my team and merge code to the main branch

### Freddie Mac, McLean, VA, USA

May – August 2022

Software Development Intern

- Designed over 100 tests using Java, Selenium, and Cucumber to confirm flow of data collection applications
- · Interacted with Snowflake using SQL to confirm correct usage of database information on user interfaces
- Used Eclipse and Git/GitBash to exchange code and collaborate with team
- · Collaborated in an AGILE environment within a team of five

### PART-TIME EXPERIENCE

# Athletics Department, Georgetown University, Washington, DC

August 2024 - Present

Athletic Events Operation Aid

- Directing and supporting visiting teams, setting up equipment for teams and student workers, controlling the scoreboard, recording substitutions, and turning on press box equipment
- Supporting volleyball team by setting up equipment for practices/games, maintaining court during contests, and directing visiting teams

## Sports Information, Bowdoin College, Brunswick, ME

February - May 2024

Student Worker

- Tracked and cataloged statistics during Men's and Women's Lacrosse contests
- Announced all goals and starting lineups through the PA system for both lacrosse teams
- Controlled the shot clock during Women's Lacrosse matches
- · Communicated real-time statistics to coaches for the Bowdoin Women's Basketball program in their NCAA tournament run

### **PROJECTS**

### **Analyzing Job Opportunities**

- Interfaced with SerpAPI to pull 900 job opportunities from Google
- Prompted GPT-40 using the openapi package to parse job descriptions into information about benefits, yearly salary, industry, and 10 other features
- Conducted EDA on features graphically (using Matplotlib's heat maps, box plots, scatter plots, 3D scatter plot, and line graphs), and with PCA/TSNE algorithms, sentiment analysis, LDA, Named Entity Recognition, and Time Series analysis

### Tabular and Deep-Q Learner Using Lobbying Indicator

• Developed a Deep O Network using TensorFlow and implemented a Tabular O-Learner with Pandas for reinforcement learning tasks

 Coded an indicator using lobbying data of ten large corporations over ten years, web-scraped from Quiver Quantitative, as well as indicators for RSI and MACD

### ACTIVITIES

## **Bowdoin Field Hockey Team**

August 2020 – November 2023

Captain

- Started all games my final two seasons and a three time member of NESCAC Fall All-Academic Team
- Demonstrated leadership by serving as a communication pipeline between players and coaches to optimize team performance and culture
- Managed simultaneous intense practice (25+ hours a week) and academic schedules

### **SKILLS**

Coding: Python, C, C++, Java, R, SQL, HTML, CSS, JavaScript, Quarto, Jupyter, LaTeX, Visual Studio Code, Eclipse

Automation: Selenium, Cucumber

Collaboration: Git, Github, GitBack, Jira, Confluence, AGILE methodology Packages: Pandas, NumPy, TensorFlow, Scikit-Learn, NLTK, tidyverse, dplyr Visualization: ggplot2, Matplotlib, Seaborn, Tableau

**Databases:** Relational Databases, NoSQL, Snowflake, MongoDB

Machine Learning: Classification/Regression Trees, Tabular and Deep-Q Learning, Time Series Analysis, Linear Regression, Reinforcement Learning, Neural Networks, Optimization

**Data Analysis:** Data Cleaning, Data Integration, EDA, Hypothesis Testing, PCA, TSNE **Other:** Microsoft Office, Google Collaborative Apps, Data Storytelling, Analytical Problem-Solving