SOPHIA RUTMAN
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EDUCATION

Georgetown University, Washington D.C   **May 2026**
MS in Data Science and Analytics
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); Neural Networks and Deep Learning (Python); Statistical Learning (Python, R)

Bowdoin College, Brunswick, ME   **May 2024**
BA in Computer Science and Physics   **GPA: 3.796**
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 ([Prompt Generation for Narrative Choice Generation by Sarah Harmon and Sophia Rutman](#)) 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-4o 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 Q Network using TensorFlow and implemented a Tabular Q-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, json, openapi, os, re, tidyverse, dplyr

Visualization: ggplot2, Matplotlib, Seaborn

Databases: Relational Databases, NoSQL, Snowflake, MongoDB, MySQLWorkbench

Machine Learning: Perfect Random Trees, Bootstrap Learner, Classification/Regression Trees, Tabular and Deep-Q Learning, LLM usage and prompt engineering, hypothesis testing, PCA, TSNE, Supervised/Un-Supervised Learning, Time Series Analysis, Linear Regression, Reinforcement Learning

Data Analysis: Data Cleaning, Data Integration, API Utilization, EDA

Other: Microsoft Office, Google Collaborative Apps, Data Storytelling, Analytical Problem-Solving