Sophie Marugg

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EDUCATION

Boston University College of Arts and Science   **September 2020 to May 2024**
BA Computer Science and Economics
Boston, MA

CERTIFICATES

Google Cybersecurity Professional Certificate
Issued by: Google
Credential ID: **W40GEFOVJ6XF**

Projects

Team Lead   **January 2023- May 2023**
Fair Housing Discrimination in Boston
- Conducted independent research with support of the City of Boston to research mortgage lending bias leveraging statistical modeling and machine learning.
- Developed predictive models using Lasso and Random Forest to identify key variables affecting loan approval rating, uncovering potential bias in lending decisions.
- Investigated feature selection were done using Lasso and Random Forest models, optimizing relevant variables from extensive datasets. We used a geospatial data file to enhance location-based precision in our analysis. This allowed for the City of Boston to understand which zip codes had the highest and lowest units of affordable housing.
- Finds were presented to the Boston Fair Housing Committee to inform policy decisions.

Team Lead   **January 2023- May 2023**
Predicting Star Rating of Amazon Movies

- Developed a predictive model for Amazon movie ratings using Natural Language Processing (NLP) and sentiment analysis.
- Engineered Natural Language Processing (NLP) and sentiment analysis from textual reviews, such as review length, sentiment scores and frequency of key words to create movie classifications.
- Tested our system on 7 models- Linear Regression, KNN, Lasso, Ridge Regression, Decision Trees, Random Forest and Boosting. Then, we compared all the models to get the most optimal output, highest accuracy was Random Forest, and lowest accuracy was Decision Trees.
- Communicated key findings through data visualization and statistical analysis, optimizing interpretability.

WORK EXPERIENCE

Web Developer   **September 2024 - Present**

Freelance   *Boston, MA*
- Utilized front-end technologies including HTML, React, CSS, JavaScript and Vue.js to create user friendly interfaces.
- Utilized GitHub for version control to improve collaboration and deployment efficiency.
- Emphasis on the design and development of client-facing features for the consumer's website, improving user experience through interactive elements.

Boston University Computer Science Department   **September 2023- May 2024**
Course Assistant for CS506   *Boston, MA*
- Provided constructive feedback on course assignments to reinforce key understanding of complex Machine Learning concepts.
- Assisted students in Python programming and algorithm implementation.

Hood to Coast Restoration   **May 2022 – July 2022**
Software Volunteer Intern   *Portland, OR*
- Shadowed daily software testing to check for any bugs and to assist with trouble shooting, as well as adding client intake forms and restoration needs.
- Ensured that various features were finished on time, presented accordingly, and increased overall functionality of the site to make sure all specs were exceeded.
- Contributed to web and mobile app development using React Native, HTML, CSS and JavaScript.

Gray Gables   **May 2017– January 2020**
Event Planner   *Portland, OR*
- Orchestrated a diverse range of events, while managing budgets starting at $20,000 and catering to at least 40 people per event.
- Championed sustainable event initiatives by sourcing biodegradable products onsite aligning with our eco-conscious mission.
- Active communication between the party, caterers, musicians, decorators to ensure top tier events, and positive satisfaction.
- Proficiency in Salesforce

SKILLS

Programming Languages: Python, Java, JavaScript, C, C++
Web Development: HTML, CSS, React, React Native, Full-stack Development
Databases: SQL
Tools: Git, Unix, Excel, Adobe
Machine Learning: Algorithms, Data Analysis, API Development, Deployment, Mobile/App Development
Security: Linux Command Line, SIEM tools, Incident Response, Security Frameworks
Project Management: Vendor Compliance, Client Collaboration, Training and Support

Extracurriculars

Delta Gamma Fraternity   **January 2020 – May 2023**
The Women's Network   **January 2022- May 2023**
Women In Law   **September 2020 – May 2021**
Phi Alpha Delta   **October 2021- May 2022**