

Mayuri Sampathgiri

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EDUCATION

Bachelor of Science in Computer Science

George Mason University

May 2024

Fairfax, VA

EXPERIENCE

AI Software Engineer Intern | DigitalQ Inc.

Oct. 2024 - Present

- Collaborated with the development team to learn and assist in testing AI-driven applications, identifying bugs, and ensuring feature functionality through guided training and hands-on experience.
- Documented and reported bugs, while applying learned techniques to suggest improvements for enhancing performance and user experience.
- Participated in team discussions, offering ideas and feedback based on training to improve testing workflows and address issues early in the development process.

Software Engineer Intern | Caladan Consulting

May 2023 - Aug. 2023

- Designed the front-end of the company website using HTML, CSS, and JavaScript, ensuring a responsive and user-friendly interface.
- Developed and assisted in back-end development using Django, creating efficient API endpoints and integrating front-end features with server-side logic.
- Contributed to the deployment of the live website, conducting testing, debugging, and performance optimization to maintain uptime and user experience.

Learning Assistant | Statistics Department GMU

Jan. 2022 – Jul. 2022

- Assisted in the development of data-driven educational content by converting R-based statistical code into Python for better student understanding and application.

RELEVANT PROJECTS

Sports Celebrity Image Classification and Deployment | Python, OpenCV, SVM, Flask, AWS EC2, Nginx, HTML/CSS

- Built an end-to-end image classification system by applying OpenCV for face and eye detection, utilizing wavelet transforms for feature engineering, and training models using SVM, logistic regression, and random forest.
- Optimized model performance using GridSearchCV for hyperparameter tuning, achieving 90% accuracy in classifying sports celebrity images.
- Deployed the model to AWS EC2, configured Nginx as a reverse proxy, and exposed the model's predictions through a Flask API, with a simple HTML/CSS-based UI for interaction.

Sentiment Analysis of Yelp Reviews | Python, NumPy, pandas, scikit-learn, NLTK

- Designed and developed a machine learning model for sentiment analysis using KNN and various feature extraction techniques (TF-IDF, chi-squared).
- Applied advanced data transformation and preprocessing techniques to clean and manipulate text data for classification.
- Achieved 72% accuracy, utilizing statistical methods to refine model performance through cross-validation and hyperparameter tuning.

Green Card Renewal App | Java, JavaFX, Maven, JUnit, Git, Agile

- Collaborated in an Agile team to manage the data layer for a green card renewal application, ensuring data integrity and seamless integration. Utilized JavaFX to develop a user-friendly interface and implemented unit tests using JUnit and contributed to iterative project improvements through Agile sprints.
- Utilized Github Actions (CI/CD) to automate testing and deployment, ensuring continuous integration and delivery of the application.

Minesweeper Classic Game | Java, Java Swing

News API Website | HTML, CSS, Javascript, News-API

SKILLS

Programming: Python, Java, C, SQL (MySQL, PostgreSQL), MATLAB, SAS

Data Processing & Analysis: NumPy, pandas, scikit-learn, TensorFlow

Machine Learning: Classification, Clustering, Decision Trees, Regression Analysis

Tools: Git/GitHub, Jupyter, Eclipse, VSCode, Docker, Excel (Data Analysis)