SASHANK SILWAL

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EDUCATION

New York University Abu Dhabi — Abu Dhabi, UAE
Bachelor of Science in Computer Science, **GPA 3.95** — May 2023
Minors: Applied Mathematics, Interactive Media
Relevant Coursework: Computer Systems Organization, Linear Algebra, Probability and Statistics, Operating Systems, Intro to Machine Learning, Software Engineering, iOS Programming, Big Data (in progress)

SKILLS

Programming Languages: Python (Including Pandas, NumPy, BeautifulSoup, Pgmpy, scikit-learn), JavaScript, TypeScript, CSS (Including Bootstrap 4), C++, Swift, SQL
Framework & Tools: Git, Docker, Jira, Figma, GraphQL, React, Firebase, MongoDB, PostgreSQL, ExpressJS, Mocha, Cypress

EXPERIENCE

Vanilla — June 2022 – August 2022
Software Engineering Intern — Los Angeles, CA
- Implemented and designed advanced components using **React** and **Typescript**, resulting in a streamlined user experience
- Collaborated with the Product Team to develop three new features by writing engineering design document
- Optimized the **GraphQL** layer on top of **Rails**, enabling efficient retrieval and updates of attributes in the Postgres database
- Guaranteed high code quality and ensured code coverage higher than 85% by maintaining and updating thorough unit tests and end-to-end tests using **Minitest** and **Cypress**.

Center For Global Sea Level Change — May 2021 – August 2021
Machine Learning Researcher — Remote
- Implemented and evaluated a probabilistic model for predicting long-term shoreline changes given geomorphological and geologic settings under different sea level rise scenarios; currently adopted by the lab on their app for research purposes
- Recommended alternative solutions and best practices to the team, suggested **Bayesian network architecture** got adopted
- Conducted processing, interpolation, projection, etc. on geospatial data to build a dataset of over 12 million data points
- Wrote customized **Python** scripts to create maps intersection and model prediction that shortened run time from over 6 hours to under 20 minutes.

New York University Abu Dhabi — September 2020 – May 2021
Student Assistantship, Web Developer — Abu Dhabi, UAE
- Successfully migrated and restructured the NAACP Julius E. Williams Distinguished community service award-winning website to WordPress, resulting in improved functionality and user experience
- Incorporated Google Analytics to track and analyze website traffic, leading to better decision-making and optimization
- Enhanced website performance by boosting page speed load by 30% (as per Google Page Insights), leading to an improved and smoother overall experience for users, resulting in increased engagement and satisfaction.

PROJECTS

DYOR (MERN stack) — GitHub
- Developed a comprehensive web application to help users navigate the crypto space, featuring sentiment analysis, price prediction, and a personalized coin portfolio
- Designed and executed a robust back-end REST API utilizing Express.js and MongoDB, providing seamless data transfer to a custom React front-end through Axios and secure JWT authentication.

Face Mask Detection using transfer learning (CNN, OpenCV) — GitHub
- Engineered a mask detection solution to ensure real-time compliance with COVID mask guidelines
- Fine-tuned hyperparameters and added regularization on the convolutional neural network to achieve an accuracy of 90%.

NYU Bazaar (Swift) — GitHub
- Created a user-friendly mobile marketplace app for NYU students to easily buy and sell academic and furniture items with real-time notifications and efficient item categorization.

AWARDS AND HONORS

Best Presentation, *NYUAD Hackathon for Social Good* — April 2022
Top in the World, AS Mathematics, *Cambridge International Education* — June 2017