SASHANK SILWAL

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EDUCATION

New York University Abu Dhabi   Abu Dhabi, UAE
Bachelor of Science in Computer Science, **GPA 3.96**   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

SKILLS

Programming Languages: Python (Including Pandas, NumPy, BeautifulSoup, Pgmpy, scikit-learn), JavaScript, TypeScript, CSS (Including Bootstrap 4), C++, Swift
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
- Designed and built components using **React** and **Typescript** to improve the user in-app experience
- Collaborated with the Product Team on the engineering design doc to implement three new features
- Updated the **GraphQL** layer built on top of **Rails** to allow retrieval and updates of attributes on the **PostgreSQL** database
- Maintained and updated unit tests and end-to-end tests using **Minitest** and **Cypress** to ensure code coverage higher than 85%

Billion Oyster Project   August 2021 – December 2021
Data Analyst   New York, NY
- Conducted in-depth analysis of 10 years' worth of rainwater and water quality data collected under the Citizens' Water Quality Testing Program, utilizing statistical techniques and data visualization tools such as **Python** and **Excel**
- Prepared over 5 comprehensive reports and presentations to communicate results and findings to stakeholders, including NY state agencies, community organizations, and the general public
- Analyzed data using statistical techniques to support decision-making for New York Harbor School's diving classes, resulting in a 16-day increase in diving training
- Coordinated the Citizens' Water Quality Testing Program, including data organization, analysis, and reporting

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
- Recommended alternative solutions and best practices to the team, suggested **Bayesian network architecture** got adopted by the management team
- 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.

PROJECTS

DYOR (MERN stack)   GitHub
- Developed web application to help users better understand the crypto space by incorporating features like sentiment analysis, price prediction, and easy-to-access coin portfolio

Face Mask Detection using transfer learning (CNN, OpenCV)   GitHub
- Developed a complete face tracking and face mask detection solution to monitor mask guidelines violations in real-time
- Tuned hyperparameters and added regularization on the **convolutional neural network** to achieve an accuracy of 90%.

Mapping the Networks of Voltaire's Philosophical Dictionary (Python, NLTK)   GitHub
- Analyzed the keywords in the dictionary, using standard **NLP** techniques of **POS tagging**
- Modeled graphs using **Matplotlib** to measure the social network analysis metrics.

LEADERSHIP ACTIVITIES

Microsoft Student Learn Ambassador (Microsoft)   April 2022 – Present
Vice President (HackAD)   January 2021 – May 2021
Leadership Workshop Facilitator (Boys' Education Network)   September 2019 – November 2019