

SASHANK SILWAL

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EDUCATION

New York University

New York, NY

Bachelor of Science in Computer Science, GPA 3.96/4.00

August 2019 – 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

Python (Including Pandas, NumPy, BeautifulSoup, Keras, Pgmpy, scikit-learn), **JavaScript**, **React.js** (Including Hooks, Routers, Axios), **Typescript**, **Node.js** (Express), **HTML**, **CSS** (Including Bootstrap 4), **C++**, **Swift**, **Firebase**, **Git**, **Jira**, **GraphQL**

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
- Spearheaded three new features on the web application by collaborating with the Product Team to deliver the engineering design docs
- Updated the **GraphQL** layer built on top of **Rails** to allow retrieval and updates of attributes on the **PostgreSQL** database; required for the new feature implementations.
- Maintained and updated unit tests for backend on **Minitest** and end-to-end testing on **Cypress**; ensured code coverage higher than 85%.

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 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.

New York University Abu Dhabi

September 2020 – May 2021

Student Assistantship, Web Developer

Abu Dhabi, UAE

- Migrated, restructured, and managed NAACP Julius E. Williams Distinguished community service award-winning website (aacvr-germany.org) to **WordPress** by using customized **Python** scripts
- Incorporated Google Analytics to capture pertinent metrics and created custom visualizations regularly
- Increased website PageSpeed load performance by 30% (Based on Google Page insights).

PROJECTS

DYOR (<https://github.com/software-students-fall2021/project-setup-dyor>)

MERN stack

- 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
- Built back-end **REST API** in **Express.js** and served **MongoDB** data to custom-built React application through **React Routers** with **Axios**; Implemented **JWT authentication**

Face Mask Detection using transfer learning (<https://github.com/sashanksilwal/FaceMaskDetection>)

CNN, OpenCV

- 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 (<https://git.io/J67cA>)

Python, NLTK

- Analyzed the keywords in the dictionary, using standard **NLP** techniques of **POS tagging**
- Modeled graphs using **Matplotlib** to measure the social network analysis metrics.

VOLUNTEERING & LEADERSHIP

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