Ajay Sarjoo

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EDUCATION

Stony Brook University — Stony Brook, NY
Bachelor of Science in Computer Science and Applied Math and Statistics — *Expected May 2021*
Relevant Courses: Data Structures, Analysis of Algorithms, Systematic Program Design, Coding, and Testing, Machine Learning, Natural Language Processing, Systems Fundamentals I & II, Principles of Database Systems, Principles of Programming Languages

EXPERIENCE

Machine Learning Researcher — December 2019 - Present
Ethos Lab — *Stony Brook, NY*

- Explored the performance of deep learning models on mobile devices by constructing and training several convolutional neural network classifiers on multiple image datasets, achieved an average baseline testing accuracy of 88%
- Improved testing accuracy by 10% through the application of concepts such as learning rate optimization and mixture of experts
- Leveraged knowledge in Python libraries such as TensorFlow, OpenCV, and NumPy

Machine Learning Intern — June 2020 - August 2020
Bloomberg LP — *New York, NY*

- Researched and developed a system to detect critical alarms in company servers up to several hours in advance by training and testing an anomaly detection model on over 200,000 system logs
- Assessed the employee experience on over 28,000 hardware replacement tickets by creating a sentiment analysis API to determine user feedback, scaled the API to different problem types
- Assisted in the return to office initiative for over 300 employees at Bloomberg's NYC headquarters by building and deploying an internal web application to visualize the results of an employee desk assignment algorithm
- Leveraged knowledge in Python libraries such as Flask, TensorFlow, and Streamlit, and JavaScript frameworks such as React.js

Software Development Teaching Assistant — August 2019 - May 2020
Stony Brook University Department of Computer Science — *Stony Brook, NY*

- Supported over 220 students in a course that covers fundamentals in full-stack programming and information management
- Helped students with techniques in software design, event-driven and web programming, databases, and code maintainability
- Facilitated student learning through weekly office hours and resolved additional concerns through discussion boards and emails

Machine Learning Intern — May 2019 - August 2019
Bloomberg LP — *New York, NY*

- Conceived a natural language processing heuristic that applies topic modeling on over six million tickets to determine commonly asked questions by clients, created an API to provide business insight made possible by the topic modeling
- Streamlined the workflow for executing over 100 backend cleanup scripts by designing and deploying a web application that creates and executes these scripts based on user-specified parameters
- Leveraged knowledge in Python frameworks such as Flask and Django, web development languages such as HTML, CSS, and JavaScript, and machine learning libraries such as Sci Kit-Learn and NLTK

PROJECTS

PressPlay - *MongoDB, Express.js, React.js, Node.js* — May 2020 - Present

- Created a full-stack web application that emulates a video-streaming service
- Implemented drag-and-drop video uploading, comments, and likes/dislikes for videos using Express.js
- Defined several database schemas for thousands of users and video storage information using MongoDB

SAK's Trading Post - *Java, MySQL, HTML, CSS, JavaScript* — January 2019 - May 2019

- Facilitated the development of a full-stack online stock-trading app for a course project
- Engineered backend operations that support over 40 stock and order transactions using Java
- Designed the schema and relevant tables to store customer and stock data using MySQL

Course Site Generator - *Java, JavaFX, HTML, CSS, JavaScript* — August 2018 - December 2018

- Launched a project that allows instructors to dynamically generate webpages for their courses
- Customized user interface functionality in Java to include course events, office hours, and teaching assistant information
- Integrated JSON and XML to save, load, and export information and HTML, CSS, and JavaScript to generate the webpages

SKILLS

Languages: Java, Python, MySQL
Data: Sci-Kit Learn, TensorFlow, Pandas, NumPy
Web Development: HTML/CSS, JavaScript, React.js, Node.js
Tools and Technologies: Git, Docker, Linux