

# Ajay Sarjoo

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## EDUCATION

### Stony Brook University

*Bachelor of Science in Computer Science and Applied Math and Statistics*

Stony Brook, NY

*Expected May 2021*

Relevant Coursework: Data Structures, Analysis of Algorithms, Systematic Program Design, Coding, and Testing, Systems

Fundamentals I, Technical Communications, Principles of Database Systems, Linear Algebra, Probability and Statistics

## EXPERIENCE

### Teaching Assistant for Fundamentals of Software Development

*Stony Brook University - Department of Computer Science*

August 2019 - Present

*Stony Brook, NY*

- Supported over 180 students in CSE 316: Fundamentals of Software Development under Professor Richard McKenna
- Assisted students with software development techniques in scalable software design, event-driven and web programming, databases, and code maintainability, as well as languages such as HTML, CSS, JavaScript, React.js, and MySQL
- Facilitated student learning through weekly office hours and resolved additional concerns through discussion boards and emails

### Software Engineering Research Assistant

*PoliTech*

January 2019 - Present

*Stony Brook, NY*

- Established security protocols that provide control over permissions using the Django framework in Python
- Assisted with the development of the schema to store political data, such as state demographics and boundaries, using MySQL
- Integrated the Django Rest Framework to establish routing endpoints for API calls to PoliTech's MySQL database

### Data Science and DevOps Intern

*Bloomberg LP - Electronic Trading Operations (ETO)*

May 2019 - August 2019

*New York, NY*

- Developed a natural language processing heuristic that implements 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 ETO's workflow for executing backend cleanup scripts by building a web application that creates and executes these scripts based on user-specified parameters
- Decreased the number of logout suppression errors by creating a scalable recommendation system that analyzes client activity and suggests a weekly schedule for monitoring sessions
- Leveraged knowledge in Python, specifically frameworks such as Flask and Django, web development languages such as HTML, CSS, and JavaScript, and data science libraries such as NLTK, Sci Kit-Learn, and pyLDAvis

### Data Management Intern

*PENCIL, Inc.*

July 2018 - August 2018

*New York, NY*

- Created an algorithm in Python that verified over 2000 commercial and residential addresses from old databases
- Scraped NYC Department of Education websites for over 1200 public schools that had missing identification credentials used for school verification
- Implemented an application that parses NYC public school data to fill in missing credentials for over 800 schools in a database

## PROJECTS

### 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 CSE 305 course project
- Designed the schema and relevant tables to store customer and stock data using MySQL
- Customized user interface for different types of users using HTML, CSS, and JavaScript
- Engineered backend operations that support over 40 stock and order transactions using Java

### Course Site Generator - Java, JavaFX, HTML, CSS, JavaScript

August 2018 - December 2018

- Developed a course project for CSE 219 that allows instructors to dynamically generate webpages for their courses
- Customized user interface functionality in JavaFX 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
- Wrote over 10,000 lines of code and adopted industry-standard design practices when implementing this application

### Opus Financial Manager - Python, Vue.js, Node.js

September 2018 - October 2018

- Trained a linear regression model to predict stock trends based on closing stock prices and Google Trends scores using Sci-Kit Learn
- Optimized the model to consider predicted stock prices based on daily positive and negative company news in the past five years
- Generated smart recommendations based on the trend-line of a stock's prediction model

## SKILLS

**Languages:** Java, Python, MySQL

**Data:** Pandas, NumPy, Sci-Kit Learn, Seaborn, NLTK

**Frameworks:** Flask, Django, React.js

**Web Development:** HTML, CSS, JavaScript, Node.js

**Tools and Technologies:** Git, Trello, Docker

**Software:** Jupyter Notebook, Android Studio