Raafi Rahman

Mathematics BA/MA Student

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Education

City University of New York Hunter College BA/MA program (*GPA: 3.607*) — **New York, New York**
- Bachelor's: Mathematics/Computer Science minor — **Expected June 2022**
- Master's: Applied Mathematics

Coursework: Calculus 1-3, Linear Algebra, Numerical Methods, Software Analysis, Statistics, etc.

Staten Island Technical High School — **Staten Island, New York**
- Advanced Regents Diploma — **Graduated June 2018**

Projects

HAL9001 (*Python*)
Personal assistant and chatbot created using Tensorflow. The model utilizes the "bag-of-words" NLP technique to decipher the command of the user. Model created using Tensorflow. Data manipulation done through the Natural Language Toolkit (NLTK). Incorporates the Spotify API to allow Spotify control and the OpenWeather API for real time weather retrieval. HAL9001 is able to search Google, Youtube, and Wikipedia. Other tasks include retrieving the time and date. Light conversation is also possible.

Planetarium Arcadium (*Javascript, HTML, CSS, SQL*)
Led a team of 4 people total to create a full stack (PERN stack) planetary system visualizer web app. Data obtained from the NASA Exoplanet Archive and stored in a PostgreSQL database with more than 3000 items. Front end built using Javascript, React.js, and Node.js. Users are able to search up, visualize, and learn about distant stars and orbiting planets.

Digit Classifier (*Python*)
User is able to "handwrite" a digit and then the model will return its best guess at which digit it is. Model created and trained using Tensorflow. The data utilized is the MNIST handwritten digits dataset, retrieved using keras and read using OpenCV. Achieved an accuracy of 99.9% among the test data.

Stock Price Predictor (*Python*)
Created and trained using Tensorflow. The dataset used is the open source Yahoo! stock price repository. The model trains off of a given ticker's closing price for a given range of dates, and determines the closing price for the next day after the range.

Shortest Path Finder (*C++*)
Used Dijkstra's algorithm to create a shortest path finder application. Utilized sorting algorithms to order nodes by distance.

Technical Skills

Languages: Python, C++, HTML, CSS, SQL, Javascript
Technologies: Tensorflow, Anaconda, NumPy, Matplotlib, Pandas, Scikit-Learn, OpenCV, Keras, Natural Language Toolkit, Flask, Tkinter, MySQL, PostgreSQL, React.js, Node.js, Express.js, Visual Studio Code

Work Experience

Five Eleven Deli and Grocery (*Sales Associate*) — **Staten Island, New York**
- Entrusted to mediate business-bank transactions — **2017 - Current**

Bright Leadership Academy (*Tutor*) — **Staten Island, New York**
- Designed lesson plans and taught Math, English, and Science to students of grades 3-8 — **2015 - 2017**
- Prepared middle schoolers for the Specialized High Schools Admissions Test (SHSAT)

Extracurriculars

South Asian Culture Club Executive Board (*Graphic Designer*) — **2020 - Current**
- Designed promotional flyers for many events that led to over 50 new members joining
- Engaged in social, financial, and logistical decision making

Hunter Symphony (*Trombonist*) — **2018 - 2019**
- Performed pieces by Mozart, Tchaikovsky, and Bartok

Additional Information

Spoken Languages: English (*Native*), Urdu/Hindi (*Conversational*), Russian (*Basic*)
Miscellaneous Skills: AutoCAD Certified, Fusion 360, Revit, Trombone, Baritone, Guitar, Computer Building, Photoshop
Interests: Chess, Math, Music, Space, Futurology, Investing, Philosophy, Metaphysics, Etymology