Raafi Rahman

rahmanraafi00@gmail.com | (646) 334-1690 | Staten Island, New York | raafirahman.com

Education

City University of New York, Hunter College - Dual Degree - Major GPA: 3.75, Cum. GPA: 3.69	New York, New York
Master of Arts in Applied Mathematics	Dec. 2022

- Data Science & Machine Learning, Adv. Machine Learning/Deep Learning/NLP, Numerical Methods, Stochastic Optimization, Modeling & Visualization, Adv. Probability Theory, Measure Theory

Bachelor of Arts in Mathematics, Minor in Computer Science

- Linear Algebra, Real Analysis, Ordinary Differential Equations, Calculus 1-3, Topology, Abstract Algebra, Software Analysis, SQL Programming, Discrete Probability, Applied Statistics

Experience

WebMD - Data Science Intern: *Vertica, GCP Suite, Scikit-Learn, JupyterLab, Tableau*	New York, New York
	Jun. 2022 - Aug. 2022

- Developed a medical doctor verification system and a nurse verification system using Google Cloud Provider AutoML Vision and more than 30,000 data points provided by data scraping contractors
- Provided insights for clients by determining which doctors were the best candidates for drug advertisement through exploratory data analysis, linear regression, and k-nearest neighbors regression
- Created lookalike audiences using k-means clustering using the elbow curve method to find the optimal number of clusters and visualized the results in Tableau to clearly explain findings to team members

Convertli - Software Engineer: *React, Node, Express, GraphQL, Firebase, TypeScript*	Hoboken, New Jersey
	Nov. 2021 - May 2022

- Produced Shopify apps aimed at increasing and tracking customer conversion rate
- Created and maintained product sales and product views NoSQL Firebase databases
- Designed the merchant facing data analytics panel to allow users to track conversions and sales

Projects

Face Recognition with Siamese Neural Networks

- Took a one-shot learning approach to create a model trained off of more than 10,000 pairs of images that can determine whether a pair of images contain the face of the same person or not
- Used a Siamese network architecture to create embedding vectors in representation space for 2 images at a time
- Minimized cost from contrastive loss using stochastic gradient descent
- Optimized for precision to reduce false positives and achieved 85% precision on testing data

An Analysis of Pakistani Homes

- Analyzed the Pakistani housing market using exploratory data analysis and machine learning to predict home prices
- Built and compared models using linear regression, polynomial regression, k-nearest neighbors regression, decision tree regression, and random forest regression
- Ranked models based on their coefficient of determination

HAL9001

- Model uses the bag-of-words technique to interpret the user's command. Lemmatized and tokenized using NLTK
- Third-party APIs, such as Spotify API and OpenWeather API, incorporated for chatbot control
- HAL9001 is able to search queries on Google, Youtube, and Wikipedia

Planetarium Arcadium

- Led a team of 4 people to create a full (PERN) stack orrery web app
- Dataset is stored in a PostgreSQL database hosted in an AWS EC2 instance served through an Express server
- Web app built using Javascript, React, and Node
- Users can search up and visualize distant stars and their orbiting planets

Skills

Programming Languages: Python (Anaconda), SQL (MySQL, PostgreSQL, Vertica), JavaScript, TypeScript, HTML, CSS, C++
Technologies: Tensorflow, Scikit-Learn, SciPy, Keras, OpenCV, NLTK, PyMC3, Tableau, Firebase, DbVisualizer, React, Express, GCP AutoML Vison/Tables/BigQuery/Vertex AI/Cloud Storage, AWS EC2/Amplify/RDS/S3, Linux, Jira, Confluence, Asana
Spoken Languages: English (Native), Urdu/Hindi (Conversational), Russian (Basic)

Extracurriculars

South Asian Culture Club - President

- Created Tableau dashboards to explain event finances and insights to executive board members
- Recruited more than 200 new members
- Organized and hosted in-person events for more than 350 attendees
- Controlled and allocated more than $10,000 worth of funds