SUSHOBHAN PARAJULI

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EDUCATION

Baruch College – Weissman School of Arts and Sciences New York, NY

Bachelor of Arts in Mathematics | *Cumulative GPA: 3.5/4.0* Expected May 2023

Relevant Coursework: Abstract Algebra, Algorithm and Programming (Python), Business Statistics, Calculus, Computer Information Systems, Discrete Mathematics, Financial Mathematics, Fundamental Algorithms, Inferential Statistics, Intermediate Macroeconomics, Linear Algebra, Mathematical Probability, Mathematics of Data Analysis (R), Stochastic Processes

SKILLS

Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Seaborn, Dplyr, Ggplot2, Tidyverse, Lubridate, Tidycensus
Machine Learning: Scikit-learn, NLTK, TensorFlow, Hugging Face
Languages: Python, R, HTML, CSS, SQL, MATLAB
Tools and Frameworks: MS Suite, Google Suite, Jupyter Notebook, R studio, Linux, Git, GitHub, Flask, PyCharm, LaTeX
Languages: Nepali, Hindi, Spanish

PROJECTS

Grabanswer, *CUNY Tech Prep* Apr. 2022 – May 2022

- Utilized transformers library from an open source platform Hugging Face to import a question answering model using Python
- Built a web application using Flask, HTML, and CSS to answer questions from a long text without reading the text

Linear Regression Model on Consumer Product Dec. 2021

- Built a linear regression model with R programming language, analyzing price of consumer product and temperature
- Performed hypothesis testing to determine the linear trend in the price and the temperature
- Added multiple features to the regression model and analyzed their statistical significance to improve the model, improving adjusted R-squared value
- Wrote a report describing the findings from the linear regression

Stock Price Movement Predictor, *CUNY Tech Prep* Oct. 2021 – Dec. 2021

- Cleaned a stock news headlines dataset using Pandas on Python
- Imported stocks price data from yahoo finance API and integrated it into the stock news headlines dataset
- Built a classification model with TFIDF vectorizer and Multinomial Naive Bayes algorithm using NLTK and Scikit Learn libraries to classify news headlines
- Web Scraped Finviz.com using Beautiful Soup library for news headlines to input in the predictor
- Designed a web app using Flask, HTML and CSS

Portfolio Optimizer, *CUNY Student Investment Challenge* Feb. 2021 – May 2021

- Coded a portfolio optimizer using Python to gain maximum returns on a portfolio of 20 different stocks
- Imported historical price data of the stocks using Pandas for backtesting
- Calculated annual expected return and annual volatility of the portfolio by allotting 5% weight on each stock
- Calculated discrete allocation of each stock that maximizes the expected return for a given volatility
- Improved the annual expected return of the portfolio from 34% to 59% while maintaining the volatility of 28%

RELEVANT EXPERIENCE

City University of New York New York, NY

Teaching Assistant, CCNY STEM Institute Jun. 2022 – Present

- Work as a teaching assistant for Pre-Calculus and General Chemistry in a summer school for high school students
- Perform all assistant teaching duties, including mentoring, lecturing, grading and clerical help
- Provide guidance and feedback to 100+ students

Microsoft Research New York, NY

Fellow, Data Science Summer School May 2022 – Jun. 2022

- Learned skills and technologies like Unix bash, Git, R, Statistical Learning, Linear Regression, and Research Replication through daily lectures and assignments
- Collaborated with a fellow and mentors in replicating research, utilizing data visualization and regression model, and wrote a report describing the research replication

CUNY Tech Prep New York, NY

Fellow, Data Science Aug. 2021 – May 2022

- Learned skills and technologies relevant in the field of Data Science and Machine Learning through weekly lectures and assignments
- Collaborated with fellows and mentors in building data science projects