AASHMAN RASTOGI

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EDUCATION

University of California, Los Angeles **Expected Graduation : June 2025**

B.S in Statistics and Data Science

- *Minor in Data Science Engineering*

- ***Major GPA*** *3.9 – Dean's Honors List (Fall 2021, Spring 2022, Fall 2022)*
- ***Relevant Coursework*** **:** Data Structures & Algorithms, Python with application (Data Science), Probability & Statistical Distributions, Multivariable Calculus, Mathematical Modelling, Building systems with GPT AI (DeepLearning.AI)

TECHNICAL SKILLS

Programming Languages: C++, SQL, R , git, shell, Python (NumPy, Matplotlib, Pandas, Seaborn, Plotly, Scikit-Learn)
AI : Langchain, Openai, TensorFlow
Software: Qgis, ArcGIS, Docker, Figma (UI/UX)
Tools : GitHub, XCode, Visual Studios, Microsoft Excel, G-suit

RELEVANT EXPERIENCE

Data Science Analyst | Deloitte **June 2023 – Present**

- Leveraging prompt engineering techniques with OpenAI's GPT-3.5-turbo model to enable code generation, explanation, conversion and extension files generation within a web service for ongoing generative AI project at Deloitte India and for clients
- Focused on prompt engineering to enhance accuracy for various functionalities and fine-tuned the hyperparameters for optimization.
- Collaborated closely with the development team for seamless front-end integration, enhancing user experience and conducted research on alternative open source LLMs suitable for project
- Developing functions enabling users to select preferred methods for null value handling and am currently integrating llama-2 with Jupyter notebooks through quantization for advanced data analysis

Analytical Consultant | Absolutdata – an Infogain Company **December 2022 – January 2023**

- Innovatively dockerized the 'Navik - Marketing AI' application within a Python environment for deployment by a telecommunications firm in Africa, facilitating potential revenue growth in Ghana by 15%
- Demonstrated initiative by creating a personal test python package to enhance understanding of Docker and Git
- Acquired knowledge on business analytics and machine learning strategies used in the package, including Customer Lifetime Value (CLTV) prediction, cross-selling, and up-selling pathways, along with churn reduction and customer retention techniques

Project Management Intern | Edge of Space Academy: Spaceflight Instrumentation and Mission Design **July 2022 – August 2022**

- Effectively managed the Ashton Prairie Near Infrared Sensing team, overseeing drone construction for aerial imagery
- Leveraged Python to develop data analysis algorithms and perform post-processing of images to extract near IR and red band data
- Analyzed Normalized Difference Vegetation Index (NDVI) values to discern vegetation health and stress levels during heatwave
- Developed the project within a $1000 budget, promoting it as a cost-effective solution for land/ecology management to local US farmers and small corporations

Undergraduate Research Assistant | UCLA Department of Earth, Planetary and Space Sciences **April 2022 – November 2022**

- Collaborated with EPSS Phd student to study Longmen Shan and Min Shan Mountain systems across the Tibetan Plateau and Sichuan Basin by learning Qgis to make cross-sectional elevation profiles and thru data visualization
- Utilized Python to formulate topographic swath profiles, enhancing understanding of gradient variations in both ranges.
- Digitized the regional map using ArcGIS, conducted coordinate transformation, and developed a comprehensive mineralogical map available for public research

PROJECTS

Credit Card Late Fee Prediction Model based on Personal Characteristics **May - June 2023**

- Utilized data cleaning and feature engineering strategies including label encoding and one-to-one mapping to enhance compatibility with predictive modeling algorithms
- Conducted feature selection using variance threshold and SelectKBest models to get top 10 independent variables for prediction
- Employed various machine learning models like Random Forest, XGBoost, and KNN with hyperparameter tuning to maximize model performance, achieving an accuracy of 0.7405

Algorithmic Trading **December 2022**

- Developed a Python script capable of accepting portfolio value and determining equal weight S&P 500 index fund purchases
- Utilized IEX cloud API token and performed batch API calls to extract relevant data
- Transformed the data into excel files using xlsxwriter library in python for enhanced visualization

Penguin Species Prediction **November 2022 - December 2022**

- Executed data cleaning and feature selection processes in Python to establish a highly predictive variable set for penguin species
- Conducted comprehensive exploratory analysis, providing summary statistics and insightful visualizations of variable relationships
- Trained a multinomial logistic regression, Random Forest and SVM model achieving 97% accuracy in predicting penguin species

Analysis of racial bias in algorithm used to manage the health of populations **November 2022**

- Trained a regression model to probe potential racial bias in an algorithm for enrolling high-risk individuals in care programs.
- Demonstrated that differences in medical costs between white and black patients leading to lower risk scores for black patients

LEADERSHIP

DataRes | Member April 2023 – Present
UCLA Career Center | Senior Operations and Events assistant April 2022 – Present