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, Mathematical Modelling, Building systems with Chat GPT and Prompt Engineering (DeepLearning.AI)

TECHNICAL SKILLS

Programming Languages: C++, SQL, R , git, shell, Python (NumPy, Matplotlib, Pandas, Seaborn, Plotly, Scikit-Learn)
AI : Langchain, Openai, llama-2, TensorFlow, Huggingface, Prompt Engineering, LLM, PandasAI
Software: Qgis, ArcGIS, Docker, Figma (UI/UX)
Tools : GitHub, XCode, Visual Studios, R-studios, Microsoft suit, G-suit

RELEVANT EXPERIENCE

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

- Utilized prompt engineering with OpenAI's GPT-3.5-turbo to drive code generation, explanation, conversion, debugging and optimization for a generative AI web service, serving both Deloitte India's in-house project and external clients
- Optimized prompt engineering approaches to boost functional accuracy and meticulously fine-tuned hyperparameters such as top_p, temperature and presense_penalty for peak performance
- 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
- Designed and implemented user-friendly functions for null value handling in datasets. Actively lead the integration of LLAMA-2 into Jupyter notebooks using quantization techniques to create a proprietary LLM exclusive for Delloite India.
- Spearheading the development of Prompt Engineering solutions for comprehensive dataframe analysis, leveraging the capabilities of OpenAI's GPT-3.5-turbo model and PandasAI to create a tool similar to code interpreter, with 90% accuracy received during testing.

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, catalyzing an anticipated 15% revenue surge in Ghana.
- Proactively developed a personal Python test package, deepening my expertise in Docker and Git operations.
- 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
- Streamlined feature selection through variance threshold and SelectKBest methods, isolating the top 10 variables for accurate predictions.
- Harnessed machine learning models such as Random Forest, XGBoost, and KNN, coupled with precision hyperparameter tuning, attaining 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

LEADERSHIP

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