NIRUD MOHAN

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Education

University of Maryland, College Park

Aug. 2024 - Present

Master's in Applied Machine Learning

College Park, MD, USA

Current GPA : 3.76

Relevant Coursework: Principles of Machine Learning, Principles of Data Science, Probability and Statistics, Optimization, Algorithms and Data Structures for ML

Misrimal Navajee Munoth Jain Engineering College

Aug. 2019 - June 2023

Bachelor's in Computer Science Engineering

Chennai, TN, IND

 $Cumulative\ GPA: 8.82$

Technical Skills

Programming: Python, Java, C ++ , HTML/CSS, R, SQL, MongoDB

Machine Learning Techniques: Large Language Models (LLMs), Transformers, XGBoost, Adaboost, Fine-tuning, RAG,

Model Optimization, Feature Engineering

Technologies/Frameworks: Kaggle, GitHub, Redis, Guardrails, Docker

Libraries: Matplotlib, NumPy, Pandas, JAX, SciPy, Scikit-learn, Langchain, Llama-index, Nemoguardrails

Experience

Thapovan Info Systems

Oct 2023 - June 2024

Junior Machine Learning Engineer

Chennai, TN, IND

- Developed and Deployed Chatbots: Designed end-to-end LLM-powered chatbot systems using Hugging Face Transformers.
- Integrated Guardrails for LLMs: Improved interaction accuracy by 30% by creating structured input/output validation pipelines and implementing Retrieval-Augmented Generation (RAG).
- Increased accuracy upto 96%: By effectively implementing advanced Retrieval Augmented Generation techniques.
- Collaborated Cross-Functionally: Used Jira and Agile to manage 3+ project tasks, ensuring timely delivery and team collaboration

Azentio Software

Feb 2023 - Sept 2023

Software Developer Intern

Chennai, TN, IND

- Architecture Optimization: Contributed to refactoring the monolithic architecture into a multi-server structure, improving system scalability and performance.
- API Development: Separated UI and API into two projects, improving security and scalability by exposing only the logistics API.
- Data Integration: Conducted data analysis using Scrapy and BeautifulSoup4 to efficiently scrape and preprocess large datasets for in-depth insights.

Coursework and Capstone Projects

Early Diagnosis of Alzheimer's Disease | Python, Kaggle, Streamlit, Tensorflow, ROBEX

June 2023

- Developed and trained multiple neural networks on MRI scans, enabling accurate analysis and predictive modeling for healthcare applications.
- Analyzed medical imaging datasets from the Alzheimer's Disease Neuroimaging Initiative (ADNI).
- Ensemble learning techniques provided better results and the overall accuracy was above 97%

University Admit Eligibility Predictor | Python, Flask, HTML, CSS, Linear Regression

November 2022

- Proposed a platform that predicts admission chances with over 95% accuracy based on student profiles and university rankings.
- Processed user inputted information in the back-end of the app to return the final prediction of their chance of being admitted.
- Linear Regression was used to predict the chances of admission for the students based on their profile.

${\bf Leadership}\ /\ {\bf Extracurricular}$

- Led tactical gameplay decisions and mentored a team of 11 players, fostering a winning mentality that secured a runners-up finish among 32 teams at the SMK FOMRA cricket tournament.
- Hosted an inter-college technical quiz event during college culturals, over 200 participants from multiple colleges.
- Volunteered to host 'Sangamitra', an event that engaged physically challenged children from government schools in fun activities throughout the day.