ADITYA MAHAMUNI

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Machine Learning Engineer at NatWest with 4 years of experience in software development and a specialization in Machine Learning and NLP. My current work focuses on Applied AI, leveraging GenAI technologies to build LLM applications. Previously, I worked at Nvidia, where I optimized CI/CD pipelines and developed tools for autonomous vehicle systems.

TECHNICAL SKILLS

Programming Languages: Python, C++, SQL
Technical Skills: Machine Learning, Optimization, LLM, NLP, Prompt Engineering, NumPy, Pandas, PyTorch, Tensorflow, Transformers, LangChain, Object Oriented Programming, Design Patterns, RAG
Tools and Technologies: Linux, Docker, Jenkins, CI/CD, Django, Gitlab CI, Git, JIRA, Kibana, Grafana, Agile (Scrum)

EXPERIENCE

NatWest, London, UK – Machine Learning Engineer **Dec 2024 - Present**

Nvidia Corporation, Pune, India - *Software Developer* **July 2019 – Aug 2023**

- Designed an innovative and scalable Python framework for AV simulation, authoring 1,000 training simulation scenarios to drive continuous innovation in autonomous vehicle development.
- Optimized CI/CD pipeline using Python, Gitlab CI, and Docker, enhancing deployment efficiency by 50% and reducing scenario update times by 40%.
- Created automated testing frameworks with Jenkins and Python, reducing manual testing efforts by 60% and decreasing testing cycles from 3-4 days to 1 day.
- Developed ML tools and CI/CD pipelines using NLP and PyTorch/TensorFlow, accelerating development.
- Built a diagnostic tool with Python and Linux, reducing platform-specific issues by 60% and improving reliability.
- Led technical projects with strong communication skills and a focused approach, ensuring timely delivery and alignment with project requirements while collaborating with cross-functional teams.

EDUCATION

University of Warwick, Coventry, UK **Sept 23 – Sept 24**
Master of Science Computer Science **(Degree Classification: 2:1)**

Government College of Engineering, Aurangabad, India **July 2015-May 2019**
Bachelor of Engineering, Information Technology (CGPA: 7.448/10.0)

PROJECTS

Event Extraction from Financial Articles Using Natural Language Processing (MSc Dissertation) - Link
Developed and implemented NLP techniques for event extraction from financial articles, leveraging zero-shot and few-shot learning using generative capabilities of different LLM models, along with fine-tuning of Large Language Models (LLMs) for accurately identifying and classifying the financial events.

A Clustering and Regression Analysis of Financial Health and Stock Performance – Link
Enhanced risk assessment and decision-making for financial analysis by developing a Python-based financial analysis with 99% accuracy and RSME of 1.118, utilizing clustering analysis for market insights and resilience analysis of major companies.

Prediction of Protein Expression – Link
Built prediction model utilising image analysis to predict protein expression levels in various biological tissues. Achieved feature extraction using PCA, GLCM, and Transfer Learning and OLS and SVR for regression analysis. Obtained RMSE score of 0.677 using a CNN architecture for predicting protein expression levels.

CERTIFICATIONS

Neural Networks and Deep Learning by DeepLearning.AI – Sept 2020