Nitheesh Vijayan

AI/ML Engineer
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EDUCATION

Christ Deemed to be University — Pune, Lavasa, India
Master of Science - Data Science — **June 2022 – 2024**
Christ Deemed to be University — Bangalore Central Campus, India
Bachelor of Science - Computer Science, Mathematics, Electronics — **June 2019 – 2022**

SKILLS SUMMARY

Languages: **Python, SQL, Java(basic), R Programming (basic), HTML (basic), CSS (basic).**
Frameworks: **Machine Learning, Neural Networks, PyTorch, Scikit-learn, Keras, Pandas, NumPy, Transformers, OpenCV, LLMs, RAG, MLOps.**
Tools: **Power BI, Cursor AI, GitHub, Linux, AI Tools, Web Analytics (Google Analytics GA4).**
Soft Skills: **Problem Solver, Analytical Thinking, Teamwork, Communication, Leadership.**

WORK EXPERIENCE

ML Engineer | Constient Global Solution — **January 2024 – Present**

- Built and deployed 2 AI/ML solutions that improved process efficiency and reduced manual effort.
- Produced four distinct machine learning prototypes aimed at solving current industry obstacles that resulted in enhanced interdepartmental collaboration metrics.
- Worked with Docker to containerize and deploy AI/ML models, streamlining model portability and ensuring consistent performance across environments.
- Contributed to full-stack AI deployments on cloud platforms in collaboration with cross-functional teams.

PROJECTS

Document Management System — **July 2024 - December 2024**

- Architected an AI-driven Document Management System (DMS) for RFPs and bills, leveraging OCR, LLMs. Deployed OCR and Transformer-based embeddings for document understanding, enabling efficient information retrieval across 50,000+ documents and improving search relevance scores by 25%.
- Used RAG pipeline to combine document retrieval with LLM-based query response and summarization. Features like automated document categorization, contextual Q&A, and multi-format support.

Zenso — **March 2024 - Present**

- Zenso, a machine learning powered gesture translation system combining sequence classification and sequence-to-sequence architectures. Engineered and trained Zenso_FingerSpellingModel, an RNN-based model leveraging MediaPipe extracted. Parallelly, built Zenso_SignLanguageTranslator, a seq2seq Transformer model with core deep learning. Integrated advanced feature engineering, data augmentation, hyperparameter tuning, etc.
- Implemented real-time pipeline for prediction and logging, achieving location-invariant accuracy via angle normalization. Focused on full-stack model deployment with real-time inference.

Collision Prevention and Safety System for Automobiles — **March 2023 – February 2024**

- The research focuses on accident detection using computer vision and YOLO (You Only Look Once) which was presented and published at the IEEE International Conference on Quantum Computing and Emerging Business Technologies (TQCEBT 2024).
- Addresses the need for real-time analysis to identify and respond to accidents, particularly during high-risk times for driver fatigue. The research emphasized night vision integration for low-light detection of pedestrians, cyclists, and animals, enhancing safety in autonomous driving.

CERTIFICATES

- Certificate Of Publication: Collision Detection and Prevention for Automobiles using Machine Learning at the 2nd IEEE International Conference on Trends in Quantum Computing and Emerging Business Technologies 2024.
- IBM Machine Learning Professional Certificate

REFERENCE

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