Abburu Aharneish

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About Me

Machine Learning Engineer with hands-on experience deploying scalable GenAI and LLM-based applications using LangChain, RAG, and Azure. Skilled in Python, MLOps practices, and cloud-native tooling to build secure, cost-effective ML solutions. Passionate about applying AI in risk, finance, and insurance domains. Eager to contribute to data-driven decision-making in dynamic, collaborative environments

Key Competencies

- Python, Azure ML, LangChain, RAG, Transformers, Generative AI, LoRA, PyTorch, HuggingFace, FastAPI, REST APIs, LLM Fine-tuning, Prompt Engineering, FAISS, Weaviate, ChromaDB, LlamaIndex, LangGraph, TensorFlow, NumPy, Pandas, Scikit-learn, CI/CD, Docker, Node.js, API Integration, Feature Engineering, Model Deployment, Docker, Clustering, N8N, OCR, ASR, TTS, RASA, PowerBI, SQL

Professional Experience

Associate Engineer — Istakapaza Inc.   *Bangalore, India May 2024 – Present*

- Developed and deployed an LLM-based automation system for loan reports, **cutting manual processing by 85% and accelerating indexing by 95%, enabling faster credit decisions and improving operational efficiency**
- Fine-tuned GPT models using synthetic data to boost accuracy in financial document parsing, **enhancing data quality for downstream analytics and reducing manual QA cycles.**
- Integrated models with the **Azure OpenAI** ecosystem and deployed them via REST APIs with continuous performance monitoring and logging for production.
- Developed robust **ML pipelines** to support data preprocessing, feature extraction, and model evaluation in production-grade environments.
- Built a RAG-based framework to improve a financial chatbot's speed and relevance, **increasing user engagement and reducing support turnaround time**
- This reduced the amount of time taken to process a loan by the Due Deligence companies.
- Bench marked every model iteration with a set standards to meet business specific KPI's

Projects

Explore the Sacred Within: Chat With KarmaKatha   *https://github.com/aharneish*

- Designed and developed an AI chatbot integrating ancient wisdom with modern AI techniques.
- Optimized responses using Low-Rank Adaptation (LoRA) and Retrieval-Augmented Generation (RAG), using Pytorch and HuggingFace Trainer API for finetuning LLama-2 model.
- Curated diverse datasets to enhance the chatbot's knowledge base and conversational abilities.

Education

MSc in Data Science and Computing   *2022 – 2024*

- **Institution:** Sri Sathya Sai Institute of Higher Learning

BSc (Hons.) in Computer Science   *2019 – 2022*

- **Institution:** Sri Sathya Sai Institute of Higher Learning