Vignesh Prasath Ramamoorthy

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Experience

Vizzhy/SML,   **May 2024 - Nov 2024**
AI/ML Intern   Bangalore, Karnataka
- Developed a retrieval system using few-shot learning that takes several medical reports and provides doctors with a summarised final report, using Phi-3 as the LLM and Deeplake for vector storage.
- Extracted the metadata of over 10,000 legal documents, stored them in Weaviate and built a RAG framework to retrieve the judgments and verdicts of similar cases.
- Constructed a model evaluation platform leveraging Python, GCP and streamlit, enabling head-to-head comparison of in-house AI model outputs against 5 leading LLMs across 20 diverse use case simulations.

Augie,   **Sep 2022 - Nov 2022**
Data Analyst   Bangalore, Karnataka
- Provided EDA and visualised over 50,000 sales transactions alongside inventory data using, generated actionable insights that drove a 20% increase in inventory turnover rates and reduced stock shortages by 15%.
- Conducted an analysis of customer purchasing behaviour, resulting in a targeted marketing campaign.
- Provided real-time dashboards using GCP, Power BI and Google Looker to forecast sales trends over time.

Core Skills

- Generative AI/RAG
- NLP and LLMs
- EDA
- Machine Learning
- Database & Data Engineering
- System Design
- Statistics
- Applied AI & Business Impact
- Data Visualization

Projects

Model Combat, https://github.com/wherearethegiggles/Model-Combat
- The Model Combat AI Agent is a Proof of Concept designed to demonstrate a cost-effective approach for foundational model optimization, tailored to specific use cases. By utilizing Direct Preference Optimization (DPO), the system showcases a more efficient method of data collection for Reinforcement Learning, reducing costs by nearly 70%.

Phi-3 RAG, https://github.com/wherearethegiggles/Phi-3-RAG-
- A RAG framework using LangChain for orchestration, Phi-3 as LLM from Hugging Face, and Deeplake as the vector store to process any format of documents and feeds the knowledge to the chatbot using few-shot learning. Chatbot built on Streamlit.

Education

Christ University,   **June 2022 - May 2024**
Masters of Science - Data Analytics   GPA : 3.1 / 4.0

SRM Arts and Science College,   **July 2019 - May 2022**
Bachelor of Science - Computer Science   GPA : 8.4/10

Technical Proficiency

Programming: Python, R, SQL
Databases: Deeplake, Weaviate, ChromaDB, PostgreSQL
Frameworks: Pytorch, Langchain, Pandas, Numpy, Polars, Pyspark, Scikit-learn, XG Boost, Hf Transformers
MLOps & Deployment: Streamlit, Gradio, GCP, FastAPI
Technologies & Tools: Git, Apache Spark, Excel, Airflow, AWS, Docker, TensorFlow, C++, OpenCV