Shlok Kulkarni

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EDUCATION

Vellore Institute of Technology

Bachelor of Technology in Computer Science

Suryadatta Public School

Junior College (HSC)

D.A.V. Public School

Highschool (CBSE)

Sept. 2021 – March 2025 Pune, Maharashtra

Vellore, Tamil Nadu

Jun. 2019 – Mar 2021

Pune, Maharashtra

Mar. 2007 - Mar 2019

EXPERIENCE

Data Science Intern

Aug 2023 – Dec 2023

Pune, Maharashtra

ElasticRun

- Designed and implemented automation solutions for resolving queries related to company policies, laying the foundation for future RAG-based applications.
- Developed a Document QA application using RAG in Python through Langchain, creating a pdf query usecase with GPT 3.5 and Cognitive Search.
- Engineered a workflow for SQL generation by cataloging the company's database and past queries. Automated the SQL generation process for efficient data retrieval and analysis.
- Pioneered the creation of a comprehensive boilerplate for LLM-based projects, standardizing development processes.
- Scripted the evaluation of RAG model performance using GPT-4, providing insights for ongoing improvements.
- Contributed to the deployment process of applications using Docker for efficient and scalable solutions.

PROJECTS

Research - Mulltimodal Sarcasm detection | Pytorch, Tensorflow, OpenSmile

Aug 2023 – Present

- Part of a research project which aims to improve upon current LLMs' ability to detect sarcasm with Multimodal context
- Trained individual models for text(Google BERT) and image (ResNet) individually as benchmarks

AIDA(AI Digital Assistant) | Python, GPT 3.5, Cognitive Search, Azure, LangChain

Aug 2023 – Dec 2023

- Developed a Document QA application utilizing RAG for querying documents with GPT 3.5 and Cognitive Search.
- Utilized Azure blob storage for citations of the queried documents.
- Laid the foundation for future RAG-based projects.

SQL Generation Workflow | Python, RAG, Databricks API

Aug 2023 – Dec 2023

- Engineered a workflow for SQL generation by cataloging the company's database and past queries.
- Developed a system to generate and execute SQL queries based on natural language input.
- Streamlined and automated the SQL generation process for enhanced data retrieval and analysis efficiency.

RAG Model Performance Evaluation | Python, GPT-4

Aug 2023 – Dec 2023

- Created a script to evaluate the performance of the RAG model using another Language Model like GPT-4.
- Provided valuable insights into the strengths and weaknesses of the RAG model, contributing to ongoing improvements.

SCORES

 \mathbf{GRE}

Verbal: 163, Quantitative: 162, Analytical Writing: 4.0

CERTIFICATIONS

Machine Learning Specialization

Coursera

Supervised, Unsupervised and Reinforcement learning

Generative AI with Large Language Models

Coursera

TECHNICAL SKILLS

Programming languages: Python, C/C++, SQL, JavaScript, HTML

Markdown languages:HTML, Markdown Developer Tools: Git, Docker, Azure, VS Code

Libraries: pandas, NumPy, Pytorch, Langchain, OpenAI, Azure