

AAYUSHI PAL

AI Engineer|ML Engineer | Data Engineer

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EXPERIENCE

Generative AI Engineer

Infosys

08/2020 - Present Gurgaon, India

Financial Statement Chatbot.

- Initiated and executed intelligent chatbot solutions to assist clients with complex financial Statement analysis for financial insights and and market trend analysis,ensuring accurate, timely responses and enhanced client decision-making.
- Designed the model architecture for chatbot development, enhancing conversational flow for the Financial Statement Analysis.
- Leveraged OpenAI to refine and optimize the chatbot, contributing to outstanding user experiences using Streamlit.
- Evaluated RAG models using RAGAS framework for high-relevance, accurate responses.
- Python | OpenAI | GPT 3.5-turbo | Langchain | RAG | Vector Embedding | Vector databases | FAISS | LLMs | NLP | Spacy | NLTK | ragas | RAG Evaluation |

Sentiment Analysis of Financial Product Reviews

- Built a sentiment analysis system focussed on analyzing customer feedback for financial products and services.
- The system retrieves relevant customer review from client's website and generate insighful and sentiment based summaries using ML models.
- Applied NLP tp classify positive, negative and neutral sentiments.
- Python|PyPDF|BeautifulSoup|Tweepy|NLTK|Scikit-learn|Matplotlib

Data Engineer

Infosys

- Led CIDP/IDP Data Migration for MDM systems, understanding Guidewire data models and developing Informatica mappings for complex transformations.
- Built and optimized ETL/data pipelines with Gen AI for enterprise Data Warehousing on-premises and in the cloud.
- Implemented CDC processes for tracking critical field changes and designed robust error-handling frameworks for deployment.
- Developed ML systems to retrieve and summarize customer reviews with sentiment analysis, achieving 45% improved data processing efficiency through optimized Python scripts.
- Managed cross-departmental data governance initiatives, ensuring compliance with industry standards and enhancing data security protocols.
- Proficient in query optimization and troubleshooting in development environments.
- Python | SQL Server | Informatica | Databricks | ETL | Snaplogic | Pyspark

PROJECTS

RAG Evaluation

Implemented RAG with the RAGAS framework to enhance context utilization, faithfulness, and answer relevancy, and achieved signifi cant performance improvements using Quantize version Zypher LLM.

GPT- Model

Throughout the project, constructed a Generative Pre-trained Transformer (GPT) model from scratch. Starting with basic language modeling and data processing, implemented self-attention mechanisms and built a Transformer architecture. Key points included attention mechanisms, multi-headed attention, feed forward layers, and model scaling. Concluding with insights into pre-training and fi ne tuning.

EDUCATION

B.Tech

Dr. A.P.J. Abdul Kalam Technical University

2015 - 08/2019 Lucknow, India

TECH STACK

Data Visualization

Data Wrangling

Python

Pandas

NumPy

EDA

Matplotlib

Seaborn

SQL

Data Preprocessing

ETL

Statistical Analysis

AWS Cloud

Azure Studio

NLP

Informatica

Keras

BERT

Prompt Engineering

Hugging Face Models

Regression

Clustering

Langchain

FAISS

Vector Embeddings

ChromaDB

Advance RAG

EC2

GPT

Retrieval-Augmented Generation (RAG)

Fine tuning

RAGAS Framework

ChatBot

Conversational AI

RAG Evaluation

RAGAS Framework

LLMs

Open AI

Llama

Conversational AI

RAG Evaluation

Generative AI

Docker

GIT

Machine Learning

Text Classifi cation