Rohil Pal

Senior ML Engineer

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WORK EXPERIENCE

Senior Data Scientist, *DataPOEM*
Mar 2024 – Present
Bengaluru, India

Marketing Insights Agent

- Co-developed an LLM agent on top of our Market Mix Modelling (MMM) pipeline, to provide accurate insights to the marketing heads, budget planners of our portfolio brands.
- Specifically, users can ask queries like "***Why did Meta Ads RROI dropped from Q3 to Q4 by 15%?***" or ***"What will happen if I shift marketing spends from Digital to TV?"*** to understand the impact of their marketing efforts better.
- **Impact:** Achieved strong adoption and positive feedback from one of our biggest clients, Unilever.
- **Tech Stack:** FastAPI, LangSmith, Claude API

DataPOEM Brand Delivery Automation

- I am currently leading the automation of DataPOEM's MMM process, that comprises of data collection and preprocessing, model training, model selection, and finally MMM results delivery.
- **Impact:** This has reduced results delivery time from 10 days to 4 days, and error rates, enabling proactive identification and resolution.
- **Tech Stack:** FastAPI, AWS Sagemaker, CloudWatch, GitHub Workflows for CI/CD

Data Scientist, *Honeywell*
Aug 2021 – Mar 2024
Bengaluru, India

Q&A Chatbot for Facility Management

- Engineered and deployed a production RAG agent as a containerised FastAPI service.
- Implemented Hybrid Search (vector + keyword search) and Cross-Encoder Re-ranking over Pinecone to achieve high-precision retrieval from complex technical documentation.
- Designed the agent to utilise tool calling for fetching real-time operational data from BMS API streams, enabling context-aware status and procedural answers.
- **Impact:** Deployed at two Honeywell Bangalore offices.
- **Tech Stack:** OpenAI API, Python, Pinecone, FastAPI

PROJECTS

Kisan Agent, *LLM-powered assistant for Indian farmers*

- Designed and deployed a multimodal agent (via Render) that provides instant crop disease diagnosis from photos (leveraging OpenAl's multimodal LLMs), real-time market analysis, and simplified government scheme information in conversational English.
- Leveraged Feast Feature Store to manage and serve market data features as LLM context, ensuring data consistency for the price analysis.
- The system uses Weaviate for RAG and DeepEval for offline evaluations.

- Tech Stack: OpenAI API, Render, Weaviate, DeepEval, React + TailwindCSS

SEC-Edgar Agent, *Q&A Chatbot for SEC-Edgar database*
- Built a Q&A chatbot that uses RAG and function calling to provide grounded answers for queries related to SEC-registered public companies.
- Utilised DeepEval for continuous, offline evaluation of the chatbot performance and deployed the app using Render.
- **Tech Stack:** OpenAI API, Render, Weaviate, DeepEval

EDUCATION

Bachelors & Masters, Computer Science, *IIIT-Bangalore*　　　　Aug 2015 – Aug 2020
CGPA: 3.41/4　　　　Bengaluru, India