

Ahamed Musthafa R S

Senior Generative AI Engineer

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Senior Generative AI Engineer with 7 years of software engineering experience, including 3+ years building production LLM solutions for the clinical and life sciences industry. Delivered Generative AI copilots, RAG pipelines, and fine-tuned models that reduced clinical query-build time by 75%, cut integration effort by 50%, and improved platform efficiency by up to 80%. Experienced in prompt engineering, LLM fine-tuning using Hugging Face, CDISC workflows, and backend engineering with Python, Django, and AWS.

WORK EXPERIENCE

Senior Research Engineer

June 2021 - Present

Saama Technologies, Coimbatore, TN

- Engineered a production-grade Gen AI copilot for Interactive Review Listing (IRL) using LLM APIs and advanced prompt engineering, accelerating clinical query-build time by 75% and improving data extraction efficiency for pharma data-review teams.
- Built a GenAI-powered code generation tool using prompt engineering and Chain-of-Thought reasoning, enabling users to replace complex manual workflows with natural language inputs.
- Fine-tuned open-source LLMs using LORA techniques on the synthesized dataset to achieve more than 80% accuracy in classifying the logically discrepant features.
- Architected ML model service interfaces enabling seamless integration with rule engines, reducing integration time by ~50% and enabling non-ML teams to consume model outputs directly.
- Developed end-to-end Smart Data Quality (SDQ) Gen AI POCs for multinational pharma clients, accelerating clinical trial data review and demonstrating LLM applicability to CDISC-compliant datasets.
- Refactored complex, hard-coded rule engines into fully configurable systems, cutting developer effort and increasing platform efficiency by up to 80%.
- Deployed ML models within the rule engine backend as part of a large-scale system upgrade, bridging the gap between data science outputs and production backend systems.

Backend Developer

July 2019 - June 2021

Zelthy, Bengaluru, KA

- Built full-stack CRM applications using Python, Django, JavaScript, and PostgreSQL for cloud-based therapy management across multiple pharma clients, serving as the engineering foundation for patient support programs.
- Designed and implemented rule logic for Patient Assistance / Support Programs (PAP/PSP) within the Zelthy-Core product, increasing product efficiency by 40% over the prior build.
- Integrated AWS CloudWatch for real-time monitoring of application and network logs, improving observability and reducing mean time to detection for incidents.
- Prototyped cross-platform mobile applications using React Native and Django REST Framework.

EDUCATION

Bachelor of Engineering - Computer Science and Engineering (2015-2019)

Government College of Technology, Coimbatore, Tamil Nadu

HSC - Math/CS (2014-2015)

Reliance Matriculation Higher Sec. School, Namakkal, Tamil Nadu

SKILLS

Gen AI	OpenAI API, Cohere, Hugging Face Transformers, LangChain, Fine-Tuning, RAG, Prompt Engineering, ASR, LLM Evaluation
Languages	Python, JavaScript, SQL, NoSQL
Libraries/Frameworks	OpenAI, Cohere, transformers, Keras, Scikit Learn, Pandas, Gradio, Streamlit, Django, Flask, SQLAlchemy, Celery, Selenium, BeautifulSoup, Plotly, Boto3
Tools	Windsurf, AWS (EC2, S3, RDS, Lambda, CloudWatch, Boto3), Kubectl, Docker, Airflow, Postman
DB/DW	PostgreSQL, MySQL, MongoDB, AWS RDS, Snowflake
Domain	CDISC Standards, Clinical Trials Design, Smart Data Quality (SDQ), Pharma CRM

PROJECTS & OTHERS

DeciSentient - AI Based Decision Agent

<https://github.com/amrs-tech/DeciSentient/>

Built a Next.js application (AI-based Decision Agent) for shopping and travelling using TinyFish WebAgent API, Gemini with ElevenLabs integrated for Voice search.

Interview Assistant Bot

<https://github.com/amrs-tech/interview-assistant/>

Built an AI-based chatbot application for generating a set of questions and answers for a provided job role or any technical skill.

Stock Prediction & Analysis

Created a Python notebook leveraging Pandas to perform analysis on Nifty stock price data of select Nifty-50 stocks, accomplishing predictive modeling of future price trends utilizing NeuralProphet, a cutting-edge Time-Series Transformer from the Hugging Face pipeline. Conducted a hands-on workshop with this activity for the college students.