

# Lasya Mundrathi

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**Aspiring LLM Engineer** with hands-on experience in building and deploying **GenAI solutions**, including **Retrieval-Augmented Generation (RAG)** pipelines and LLM integration using **Vertex AI**, **LangChain**, and **Google Gemini**. Proficient in **fine-tuning large language models**, managing end-to-end ML workflows, and deploying scalable applications via **Cloud Run** and **CI/CD pipelines** (GitHub Actions, Docker). Skilled in **Python**, **TensorFlow**, and **Scikit-learn**, with a strong grasp of **prompt engineering**, **NLP**, and **cloud-native architectures** across **GCP**, **AWS**, and **Azure**. Adept at aligning AI innovation with engineering practices to deliver production-ready, secure, and intelligent systems.

## WORK EXPERIENCE

### Data Analyst

**Cognizant Technology Solutions, Hyderabad, India**

**Dec 2020 – Aug 2022**

- Conducted **Exploratory Data Analysis (EDA)** on datasets of 4,000+ customers and 20,000 transactions, leveraging **SQL** and **Excel Power Pivot** to derive actionable insights, enabling targeted marketing strategies and improving decision-making accuracy by **20%**.
- Designed and implemented **machine learning models** (XGBoost, Random Forest) and **NLP techniques**, optimizing SEO strategies to boost website traffic by **30%**, improve SERP rankings by **40%**, and enhance customer satisfaction by **10%**.
- Reduced manual reporting time by **5+ hours weekly** and cut infrastructure costs by **20%** through migration to **Azure SQL Database**, while creating real-time **Tableau** and **Power BI dashboards** for scalable data visualization and KPI tracking.

## EDUCATION

**QUEEN MARY UNIVERSITY OF LONDON, UK**

**Sep 2022 – Jan 2024**

**MS – BIG DATA SCIENCE | Grade: Distinction**

## CERTIFICATIONS

- Microsoft Certified: Azure AI Fundamentals (AI-900)**: Generative AI, Cognitive Services, ML Studio, AutoML
- Microsoft Certified: Azure Data Fundamentals (DP-900)**: Data Lakes, Synapse, SQL, ETL Processes
- Microsoft Certified: Azure Fundamentals (AZ-900)**: Cloud Computing, Azure DevOps Services
- Databricks Lakehouse Fundamentals**: Databricks SQL, Delta Lake, Machine Learning
- Career Essentials in Data Analysis (Microsoft/LinkedIn)**: Power Query, Power BI, SQL, KPI Dashboards

## SKILLS

- Generative AI & LLM Ecosystem**: Google Gemini AI, Vertex AI, LangChain, Hugging Face, OpenAI API, ChatGPT API, Anthropic Claude, Amazon Bedrock, Model Garden
- LLM Fine-Tuning Frameworks**: Hugging Face Transformers, PEFT, LoRA, Axolotl, DeepSpeed, LangGraph
- MLOps & CI/CD**: GitHub Actions, Docker, Cloud Run, Vertex AI Pipelines, Model Registry, Terraform, Jenkins
- Machine Learning & Deep Learning**: PyTorch, TensorFlow, Scikit-Learn, CNNs, Transfer Learning, Prompt Engineering
- Vector Databases & RAG**: Pinecone, FAISS, Weaviate, Qdrant, ChromaDB
- Cloud Platforms & Infrastructure**: Google Cloud Platform (Vertex AI, Artifact Registry, Cloud Functions, Dataflow, BigQuery), AWS (Lambda, Bedrock), Azure.
- Programming & API Integration**: Python, RESTful APIs, Flask
- Data Engineering & Processing**: ETL/ELT, Data Preparation, Data Cleansing, Pandas, NumPy

## RECENT PROJECTS

### E-commerce Chatbot Deployment on GCP | RAG-Powered LLM with Cloud-Native CI/CD ([GitHub](#))

*GCP (Cloud Run, Artifact Registry), Pinecone, LangChain, Google Gemini, Streamlit, GitHub Actions, Docker*

- Developed and deployed a **Retrieval-Augmented Generation (RAG)** chatbot using **LangChain**, **Pinecone**, and **Google Gemini** LLM, delivering real-time product recommendations via a **Streamlit** interface.
- Built an **end-to-end GenAI** pipeline with **Dockerized** deployment on **Cloud Run**, automated through **GitHub Actions** and secured with **Artifact Registry** and IAM roles..
- Applied **MLOps** best practices for **CI/CD**, model integration, and prompt engineering, aligning with Vertex AI-compatible workflows and ensuring scalable, secure, and compliant deployment.

### AI ChatBot with LangGraph, LangChain, Streamlit, Google AI, and ChromaDB ([GitHub](#))

*Tools & Technologies: Lang chain, Sentence Transformer, MongoDB, Pinecone, Google Generative AI (Gemini Pro)*

- This AI-powered chatbot leverages advanced technologies to provide intelligent information retrieval and response generation.
- Using LangGraph, LangChain, Streamlit, Google Generative AI, and ChromaDB, the chatbot efficiently retrieves relevant documents, grades their relevance, and generates meaningful responses.

### Impact of COVID-19 on London Tube Ridership ([Github](#))

*Time series forecasting, XG Boost Regressor, Random Forest Regressor, Flask, RESTful API's, HTML, GitHub Actions, Power BI*

- Consolidated, aligned, cleaned, analysed, and visualized **10.48M+ passenger transactions** using Python, Power BI, and SQL, uncovering key trends such as a **40% decline** in passenger flow during Tier 4 lockdowns and identifying peak travel times.
- Developed time-series models using **XGBoost Regressor** and **Random Forest** to predict passenger flow with a **7%** lower RMSE compared to baseline models, leveraging lag features and seasonal patterns to enhance accuracy.
- Designed interactive **Power BI dashboards**, offering actionable insights on travel patterns and regional trends.