Anu Lekshmikutty Sasidharan

Gen AI Architect

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SUMMARY

Results-driven Senior AI Engineer with over 13 years of experience in designing, implementing, and scaling large-scale AI and data infrastructure across cloud and on-prem environments. Demonstrated expertise in Generative AI and GenAI, Agentic AI frameworks, and LLM integration, with a proven track record delivering end-to-end AI applications encompassing data ingestion, preprocessing, feature engineering, and deployment using LangChain, OpenAI APIs, Streamlit, MLflow, and vector databases such as FAISS, Pinecone, and Chroma. Skilled in architecting robust AI and data pipelines on GCP, AWS, and Azure, leveraging Kubernetes and Databricks for efficient model lifecycle management, platforms enablement, and CI/CD automation. Adept at shaping AI architecture and strategy to oversee the architectural landscape, applying strong technical leadership and mentorship to guide engineers, refine roadmaps, and translate technical requirements into product offerings. Experienced in machine learning and data science fundamentals, capturing use cases to inform decision-making, and leading evolution of principles that optimize design development.

EXPERIENCE

Tech Mahindra	Dec '22 — Present Toronto, Canada (Remote)
Tavant Technologies	Sep '21 — Sep '22
Allianz Technology SE	Apr '16 — Sep '21
AON Hewitt	May '15 — Apr '16

SKILLS

Relevant Skills Microservices, Cloud Infrastructure, Elasticsearch, Apache Spark, Databricks, React, Roadmap, Backend Framework, Data Products, GenAI, Landscape, Architecture, Strategy, Capture
Generative AI & LLM Engineering: OpenAI, VisionGPT, Anthropic Claude, Google Gemini, Mistral, Hugging Face Transformers, GraphRAG, Retrieval-Augmented Generation (RAG), Knowledge Graphs, Vector Databases, Prompt Engineering, Model Fine-tuning, Claude, Gemini
LLM Frameworks: LangChain, LlamaIndex, Haystack, DSPy
Vector Databases: FAISS, Pinecone, Chroma, Weaviate, Milvus
Agentic AI / LLM Orchestration Frameworks MCP, n8n
MLOPS/AIOPS: MLflow, DVC, DagsHub, Prometheus, Kubeflow, GitHub Actions, Jenkins, GitLab CI
ML / DL Frameworks: Scikit-Learn, TensorFlow, XGBoost, Keras, NLP, NumPy, Pandas, Statsmodels, Weights & Biases (W&B), Matplotlib, Seaborn
DEVOPS: Git, Docker, Kubernetes, Jenkins, AgroCD
Databases: Mysql Cluster, Neo4j
Cloud: AWS SageMaker, Bedrock, Azure, GCP
Prompt Engineering Tools: LangSmith, Ollama
Model Serving / Deployment: FastAPI, FastMCP, Streamlit
Observability / AIOps: Prometheus, Grafana, Elastic Stack (ELK)
ETL Apache AirFlow
programming Languages Python, SQL, Cypher Query Language

PROJECTS

RAG-Document-Search Link

- Designed and implemented an AI architecture using RAG to support GenAI document search. Leveraged LangChain, Hugging Face Transformers, and FAISS to capture enterprise use cases. Built scalable pipelines using optimization to serve low-latency features at scale. Enhanced retrieval using prompt engineering, re-rankers, and chunking for strategy alignment. Oversaw architectural landscape decisions to guide integration with backend frameworks. Demonstrated machine learning techniques to improve accuracy and decision-making across data products. Led architecture evolution to strengthen reliability and system performance across platforms.

MCP-InsightEngine – LLM-Based File Analyzer & Insight Generator Link

- Engineered an enterprise GenAI insight engine with AI architecture for robust integration. Leveraged Python, FastAPI, and Streamlit to capture file analysis use cases at scale. Designed architectural strategy and RESTful APIs to ensure reliable performance and integration. Applied prompt engineering and machine learning methods, including ReAct, to guide decision-making. Provided technical leadership to align architecture principles and standards for evolution. Integrated microservices with Azure and Kubernetes to oversee the architectural landscape. Enabled CI/CD automation and MLFlow observability to support roadmap-driven strategy.

Nutri-GPT | LLM-Powered Nutrition Assistant Link

- Architected a GenAI nutrition assistant with clear AI architecture and integration strategy. Used OpenAI Vision and Chat APIs to capture image-driven use cases for insights. Implemented Python and Streamlit pipelines to improve latency and decision-making. Applied prompt engineering and machine learning to enhance accuracy and safety goals. Guided architecture evolution to meet roadmap milestones across platforms and services. Documented architectural landscape considerations to ensure scalable design development.

EDUCATION

Bachelor of Technology in Electronics and Telecommunications in Engineering, Jun '05 — Aug '09
Kerala University (GPA: 6.9) India

CERTIFICATIONS

Microsoft Certified: Azure Data Fundamentals, Microsoft Oct '20

Microsoft Certified: Azure Fundamentals, Microsoft Jun '20