ANANTA KISHORE SWAIN

Generative AI Engineer | Applied AI & MLOps Systems
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PROFESSIONAL SUMMARY

Dynamic Software Engineer specializing in Applied AI, MLOps, and scalable Generative AI engineering. **1.5 years of experience** bridging enterprise backend architectures with production-grade Large Language Models (LLMs) and advanced Retrieval-Augmented Generation (RAG) pipelines. Proven success in deploying security-first AI agents, automating complex workflow data orchestration, and reducing operational latency for multi-user infrastructures.

TECHNICAL SKILLS

- **Generative AI & LLMs:** RAG Pipelines, Prompt Engineering, Agentic AI, Model Fine-Tuning (GPT-4, Llama 3.1, Gemini, Phi).
- **Frameworks & NLP:** LangChain, LlamaIndex, PyTorch, Hugging Face, Transformers, Scikit-Learn, SHAP (Explainable AI).
- **Data & MLOps:** Python, FastAPI, Docker, Kubernetes, Azure, Vector Databases (Pinecone, Weaviate, ChromaDB, PGVector).
- **Frontend & Architecture:** Vue.js 3, React, JavaScript, Event-Driven Architectures (MQTT, WebSockets, RabbitMQ, PostgreSQL).

PROFESSIONAL EXPERIENCE

Insectika Biotech | Bhubaneswar, India **Feb 2026 – Present**
Software Engineer – Applied AI & MLOps Architecture

- **AI Architecture & RAG Pipelines:** Engineered and Dockerized "ThingsHub AI," orchestrating an on-premise 3B LLM (Llama 3.1) agent for automated fleet diagnostics. Managed knowledge bases with advanced vector search to avoid model hallucinations.
- **Secure Enterprise Pipelines:** Architected real-time telemetry streaming pipelines via MQTT and RabbitMQ over 500+ active nodes. Implemented strict Prompt-Level Role-Based Access Control (RBAC) with read-only database configurations.
- **AI Development Velocity:** Integrated custom AI pairing workflows to accelerate microservice generation, dropping rollout time for production-ready feature expansions down to 4 weeks.

Insectika Biotech | Bhubaneswar, India **Oct 2025 – Feb 2026**
Embedded Software Engineer Intern – Edge Infrastructure

- **DAG Orchestration Engines:** Built a custom Node-RED style Directed Acyclic Graph (DAG) flow editor mimicking modern AI agent visual builders (like Langflow) to manage routing configurations.
- **Secure Cloud Networks:** Designed and deployed low-latency VPN network highways using FastAPI and WireGuard, providing stateless, high-concurrency access for 500+ concurrent enterprise users.

Static Consultancy | Bhubaneswar, India **July 2024 – Jan 2025**
Hybrid App Developer

- **Custom UI Optimization:** Developed clean cross-platform client-side architectures and financial application user interfaces using Flutter and state-management principles.

Samnic Tech | Remote **Jan 2023 – Mar 2023**
Application Developer

- **Core Software Engineering:** Programmed modular logic blocks, clean data sanitization scripts, and interface configurations utilizing foundational Python paradigms.

TECHNICAL PROJECTS

Local Privacy RAG Assistant

- Built a 100% zero-cloud, client-side RAG pipeline ensuring zero data leakage for highly sensitive operational documentation using **Ollama, Vector Search, LangChain, and Vanilla JS**.
- Implemented parsing algorithms, custom text chunking mechanisms, and high-speed vector cosine-similarity processing layers.

AI Academic Success Tracker

- Merged traditional machine learning engines with generative models to predict academic failure vectors and trigger multi-step, automated student action plans utilizing **XGBoost, SHAP, Google Gemini 2.5, Flask, and Vue.js**.
- Embedded SHAP explainability matrices to surface clear token attributions behind AI decisions for administrator audits.

EDUCATION & CERTIFICATIONS

- **Master of Computer Applications (MCA) – Artificial Intelligence:** Manipal Institute of Technology (Expected 2028) | **BCA:** Creative Techno College (May 2025)
- **Certifications:** IBM Generative AI Prompt Engineering, Foundational Machine Learning, Core Backend Application Architectures