Ajitha Pamula *AI/ML Engineer*

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PROFESSIONAL SUMMARY

AI/ML Engineer with expertise in **LLMs, Generative AI, Agentic AI, RAG pipelines, and Multi-Agent Systems**. Skilled in **NLP, Computer Vision, and Deep Learning**, delivering **scalable, cloud-ready AI solutions** using LangChain, CrewAI, LangGraph, AWS, Azure, and Docker. Proven track record in building **enterprise-grade automation and adaptive learning platforms**.

SKILLS

Programming: Python, SQL

ML & DL: Supervised Learning (Regression, Classification), Unsupervised Learning (Clustering), Feature Engineering, Model Evaluation, TensorFlow, PyTorch, Keras, Neural Networks (CNNs, RNNs)

Generative AI & LLMs: OpenAI API, Hugging Face Transformers, Prompt Engineering, RAG Pipelines, Llama, Ollama

Computer Vision: OpenCV, Object Detection, Image Classification, YOLO

Data Analysis & Visualization: Pandas, NumPy, Exploratory Data Analysis (EDA), Matplotlib, Seaborn, Power BI

Agentic AI: CrewAI, LangChain, LangGraph, LangFlow, Model Context Protocol (MCP), Multi-Agent Orchestration, n8n

Cloud & Deployment: AWS (EC2, S3, IAM), Azure, Docker, GitHub Actions, Linux (Ubuntu)

Web & APIs: FastAPI, Flask, Django, REST APIs, Web Sockets

Databases & Vector DBs: MongoDB, PostgreSQL, MySQL, ChromaDB, Pinecone, Weaviate

WORK EXPERIENCE

AI Engineer Feb 2025 – Present | Hyderabad, India
Lanciere Technologies Pvt. Ltd. India

- Designed and deployed an **AI-powered education platform** leveraging **LLMs, RAG pipelines, and multi-agent systems** to deliver personalized learning and automated assessments.
- Built **autonomous AI agents** for daily standups, mock interviews, and adaptive tests using **LangChain, CrewAI, and LangGraph**, improving workflow efficiency.
- Engineered **scalable data pipelines** for video/audio processing (compression, noise cancellation, Whisper STT, summarization) with results stored in **MongoDB**.
- Integrated **vector databases** (ChromaDB, Pinecone, FAISS) to optimize retrieval for **RAG-based knowledge augmentation**.
- Deployed **containerized AI microservices** on **AWS and Azure using Docker**, ensuring production-grade scalability and low-latency performance.
- Applied **ML, NLP, DL, and CV models** to enable adaptive assessments and enhance user learning outcomes.

PROJECTS

AI Evaluator – Multi-Agent Code Review System
Python, FastAPI, LangChain, LangGraph, MCP, GitHub API, Docker, AWS

- Developed a **production-ready AI evaluation system** that automated scoring, reducing manual review effort by **70%** and improving fairness and consistency.
- Orchestrated **multi-agent pipelines** (Code, Design, Pitch, Aggregator) with **LangChain** + **LangGraph**, enabling scalable and modular evaluations.
- Integrated **MCP servers** for real-time GitHub analysis and deployed **REST APIs (FastAPI)** for seamless feedback delivery.
- Containerized and deployed on **AWS with Docker**, ensuring **enterprise-grade scalability and low-latency performance**.

Edu-App – AI-Powered Voice Interview & Learning Platform
Python, Whisper STT, GPT (LLM), FastAPI, MongoDB, PostgreSQL, Docker, AWS, Azure

- Developed a **voice-first education platform** with **Whisper STT → LLM → TTS pipelines**, enabling accurate transcription, intelligent Q&A, and interactive assessments.
- Automated **mock tests and evaluations** (MCQs, coding, pseudocode) using **LLMs**, reducing manual instructor workload by **40%** and improving assessment scalability.
- Designed robust **data pipelines** with **MongoDB/PostgreSQL** for storing transcripts, results, and learning insights, ensuring reliability and efficient retrieval.
- Deployed containerized services on **AWS & Azure with Docker**, delivering a **production-grade, scalable, and low-latency cloud solution**.

Fake News Detection – NLP & Machine Learning Pipeline
Python, scikit-learn, Pandas, NumPy, NLP, Google Colab

- Designed and implemented a **text classification system** to detect misinformation, achieving **99% accuracy** on benchmark datasets.
- Applied **NLP techniques** (tokenization, TF-IDF, word embeddings) and **feature engineering** to improve text data quality and model generalization.
- Trained and optimized multiple **ML algorithms** (Logistic Regression, Random Forest, SVM, Naïve Bayes), selecting the best-performing model for deployment.
- Built a **scalable ML pipeline** in Python with **scikit-learn, Pandas, NumPy**, and deployed on **Google Colab**, demonstrating applicability for **media monitoring, fraud detection, and content moderation use cases**.

EDUCATION

Bsc(M,CC,CS) 2021 – 2024 | Guntur, India
Government Womens College (A)

- 75 %