

AKASH G

☎ +91 94423 26656 | ✉ akash.al23@bitsathy.ac.in | 🌐 github.com/Akash-AIML | 🔗 linkedin.com/in/akash-g-aiml

📍 Dindigul, Tamil Nadu, India

PROFESSIONAL SUMMARY

AI/ML undergraduate with hands-on experience in **Large Language Models (LLMs), Natural Language Processing (NLP), Retrieval-Augmented Generation (RAG), embeddings, and semantic search systems**. Skilled in building end-to-end machine learning pipelines, multimodal AI systems, and real-time AI applications. Strong foundation in deep learning, transformers, and scalable AI solutions.

EDUCATION

Bannari Amman Institute of Technology
B.Tech in Artificial Intelligence & Machine Learning

2023 – Present
CGPA: 8.13

SKILLS

Programming Languages: Python, Java

Machine Learning: PyTorch, Scikit-learn, CNNs, Transformers, RNNs, Artificial Neural Networks (ANN)

Data & Analytics: Pandas, NumPy, SQL (Joins, Aggregations), Matplotlib

AI & NLP: Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Embeddings, Vector Databases, Semantic Search

Cloud: AWS (EC2, S3, Lambda, API Gateway), API-based Inference Pipelines

Tools: Git, GitHub, VS Code, Jupyter Notebook, Vercel, Claude Code, Open Code, Antigravity, Ollama, Hugging Face

PROJECTS

Voice AI Copilot Assistant (LLM + RAG System)

- * Built a real-time voice AI assistant using Whisper, wake-word detection, and Voice Activity Detection (VAD).
- * Implemented Retrieval-Augmented Generation (RAG) using embeddings and vector databases for contextual responses.
- * Designed a streaming conversation pipeline with low-latency inference and barge-in support.
- * **GitHub:** GitHub Repository

Multimodal Jewellery RAG System

- * Developed a multimodal search system using image captioning, embeddings, and semantic similarity search.
- * Generated structured metadata using vision-language models and vector database indexing.
- * Enabled natural language and image-based retrieval using a Retrieval-Augmented Generation pipeline.
- * **Live Demo:** tanishq-rag-capstone-ii.vercel.app

Transformer-CNN Energy Forecasting

- * Designed a hybrid Transformer + CNN architecture for time-series energy forecasting.
- * Captured temporal dependencies through attention mechanisms while extracting spatial features using CNN layers.
- * Developed an end-to-end deep learning forecasting pipeline.
- * **Demo:** Project Demo

Agriculture AI Platform (Multimodal AI + RAG)

- * Built an end-to-end intelligent agriculture platform integrating plant disease detection, soil classification, crop recommendation, fertilizer guidance, and LLM-powered advisory.
- * Developed a FastAPI backend using CNN models, CatBoost, FAISS-based Retrieval-Augmented Generation (RAG), OpenAI SDK, Redis caching, and JWT authentication.

- * Implemented multilingual support (English, Tamil, Hindi, Telugu) with a React frontend enabling image-based analysis and real-time AI recommendations.
- * **Tech Stack:** Python, FastAPI, PyTorch, FAISS, React, Redis, OpenAI SDK, AWS
- * **GitHub:** github.com/Akash-AIML/Agriculture-AI

Bias AI System (Enterprise AI Fairness Audit)

- * Built an enterprise AI platform for detecting and mitigating algorithmic bias in machine learning datasets and predictive models.
- * Implemented Demographic Parity, Equalized Odds, Bias Severity Index (BSI), proxy discrimination tracing, temporal drift analysis, and NLP-based bias detection.
- * Integrated Google Gemini for compliance reporting, legal risk analysis, mitigation recommendations, and interactive AI-powered audit explanations.
- * **Tech Stack:** Python, FastAPI, React, Gemini API, Scikit-learn, Pandas, Docker
- * **GitHub:** github.com/Akash-AIML/Bias-AI-System

CERTIFICATIONS

NPTEL – Programming in Java

NPTEL – Responsible & Safe AI Systems

NPTEL – Social Networks

AI ASCEND 2026 (Powered by AWS & Kyndryl)

Machine Learning, Deep Learning & NLP Bootcamp (In Progress)

ACHIEVEMENTS

Solution Challenge 2026: Build with AI

- * Selected among the **Top 106 teams nationwide** in the Solution Challenge 2026 organized by GDG and Hack2Skill.
- * Competed against **85,000+ registrations** and over **6,700 prototype submissions**.

PromptWars 2026 Hack2Skill

- * Ranked among the **Top 500 participants nationwide** in PromptWars 2026, demonstrating proficiency in prompt engineering and Generative AI.