KOWSIK Y

Artificial Intelligence & Machine Learning | AI , GEN AI & Full-Stack Developer

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SUMMARY

AI & ML undergraduate and AI driven full-stack developer experienced in multi-agent AI systems, generative-AI apps, RAG pipelines, and full-stack platforms. Winner, Vanij Builder League (Adya AI); Top 106/6,700+ teams, Google Solution Challenge 2026. Skilled in Python,Java, TypeScript, and FastAPI/Node.js, with 10+ shipped projects spanning agentic AI, semantic search, speech AI, and cloud-certified backend architecture.

TECHNICAL SKILLS

Languages: Python, Java, C, TypeScript, JavaScript

AI / ML: PyTorch, CLIP, RAG, Multi-Agent,MCP, Vector Search (Qdrant), Prompt Engineering, OpenAI API / Gemini, STT/TTS

Frontend: React, Next.js, React Native, Tailwind CSS, shadcn/ui, NativeWind

Backend: FastAPI, Node.js, Spring Boot, REST APIs, Microservices

Databases & Tools: PostgreSQL, MongoDB, Qdrant, FAISS ,Git, GitHub Actions, Figma, Gradio,Biome

PROJECTS

AgriNexa - AI Agricultural Decision-Support Platform | *FastAPI, React Native, MongoDB, CrewAI, OpenAI API*

- Built a multi-agent agricultural advisory platform (CrewAI: Farm Planner, Risk Analyst, Advisory Writer) with live weather and mandi price feeds
- Implemented a crop-scheduling engine, soil-suitability matcher, and weather-driven pest-risk model with dynamic re-planning

GitHub: github.com/Kowsik-Y/AgriNexa

ClipSearch - AI-Powered Semantic Jewelry Search Engine | *Next.js, FastAPI, PyTorch, CLIP, Qdrant, OpenAI API*

- Built semantic text + image search using CLIP embeddings with a Qdrant HNSW vector index and an OCR pipeline (EasyOCR + GPT-4)
- Designed a FastAPI + Next.js architecture with a content-based recommendation engine; deployed live on Vercel

GitHub: github.com/Kowsik-Y/capstone2

BlendPilot - Autonomous, multi-agent AI Blender designer | *FastAPI,LangGraph,LangChain,MCP*

- BlendPilot is an autonomous, multi-agent AI copilot that translates natural language prompts into production-ready 3D assets inside Blender. Built on LangGraph, Model Context Protocol (MCP), and safe structured socket/HTTP bridges, BlendPilot coordinates 10 specialized agents to perform intent parsing, technical research, step-by-step modeling planning, autonomous geometry generation, PBR shader authoring, studio lighting, deterministic topology QA, vision-based aesthetic self-repair, and multi-format export.

GitHub: github.com/Kowsik-Y/blendpilot

StudyBuddy - AI-Powered Learning Assistant Platform | *FastAPI, Next.js, Faster-Whisper, TTS,Frontier model*

- Built a voice-first AI tutor that explains concepts, quizzes students, and runs a mock viva hands-free
- Added video/YouTube ingestion for instant Q&A on lecture content, using Faster-Whisper STT and TTS

GitHub: github.com/Kowsik-Y/StudyBuddy

ADDITIONAL PROJECTS

- **Policy Gap Analysis System -** Built a fully offline RAG pipeline auditing policy clauses against NIST rules via FAISS similarity search, classifying gaps as Adequate/Weak/Missing
  github.com/Kowsik-Y/Policy-Gap-Analysis-Report
- **Quiz Portal -** AI quiz-generation app with auth and real-time scoring (React Native, Node.js, PostgreSQL); GitHub-starred.
  github.com/Kowsik-Y/Quizz-Portal
- **Bamboo -** Microservices content platform with API Gateway & auth (Next.js, Spring Boot, PostgreSQL); collaborative project.
  github.com/Kabil777/Bamboo
- **QR-Generator / Loan Policy Chat Assistant -** React movie app (live on Vercel); client-side QR generator (GitHub Pages, CI); Gradio loan-eligibility chatbot. For more Checkout My Github : *github.com/Kowsik-Y*

ACHIEVEMENTS & CERTIFICATIONS

- Top 106 of 6,700+ teams - Google Solution Challenge 2026: Build with AI (GDG × Hack2Skill), out of 85,000+ registrations; advanced to Round 2 with Team NexMinds
- 1st Place - Vanij Builder League (Adya AI), for building an autonomous AI agent
- Salesforce Certified Agentforce Specialist | Microsoft Azure AZ-900, AZ-104, AZ-305 | AI Ignite Workshop - Kambaa Inc.
- MongoDB: Building RAG Apps Using MongoDB | AWS Educate: ML Foundations, Intro to Cloud 101, Intro to Generative AI | Cisco: Linux Unhatched ; Credly Badges : credly.com/users/kowsik-y/badges/credly

EDUCATION

Bannari Amman Institute of Technology - Sathyamangalam, Erode, Tamil Nadu

B.Tech - Artificial Intelligence and Machine Learning | CGPA: 7.76 / 10.0 (through 4th Sem) | 2023 – 2027 (Pursuing)

Kongunadu Matric Hr. Sec. School - Namakkal, Tamil Nadu
Higher Secondary (Class XII) | 2022 – 2023 | 86.7%

SOFT SKILLS

Adaptability • Collaboration • Curiosity • Self-Discipline • Problem Solving