Nadukula Hemanth

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Education

Anurag University **Hyderabad, Telangana**

Bachelor of Technology in Computer Science Engineering (Artificial Intelligence & Machine Learning) *Expected 2027*

- CGPA: 7.42/10.0

Professional Experience

Machine Learning Intern, Product Engineering Intern (AI & EdTech Platform) **July 2026 – Present**

TechSnap *Remote*

- Contributed to TechSnap, an AI-powered EdTech LMS serving 10,000+ students across colleges and institutional clients
- Designed the AI Mock Interview Module with scalable interview practice, structured feedback, resume assistance, and personalized learning workflows
- Built production-ready frontend, backend, and AI workflow features with product and engineering teams

ML Engineer & Project Developer **January 2026 – Present**

Pulse Projects (Agency) *Remote*

- Developed and deployed multiple computer vision MVPs: EfficientNet-based image classification systems and U-Net segmentation models for production environments
- Built end-to-end NLP solutions including text classification, entity extraction, and sentiment analysis pipelines deployed to production
- Architected and delivered full-stack AI applications integrating ML models with React/FastAPI frontends for enterprise clients

Projects

Agentic RAG Platform — Enterprise Multi-Agent Retrieval-Augmented Generation System **2026 — GitHub**

- Designed a production-grade **multi-agent Agentic RAG platform** that autonomously plans, retrieves, reasons, validates, and generates context-aware responses
- Orchestrated specialized **AI agents** with **tool-calling** capabilities for dynamic **document retrieval**, **web search**, **reranking**, and answer generation
- Built an end-to-end **knowledge pipeline** (ingestion, chunking, **embeddings**, **hybrid retrieval**, **cross-encoder reranking**), improving accuracy and reducing hallucinations
- Developed scalable **FastAPI** services, containerized with **Docker**, and deployed on **AWS** using a modular architecture with **LangGraph**-based workflow orchestration

Mental Health Detection System (GoEmotion-based) **2024 — GitHub**

- NLP-based mental health classification using **BERT + BiLSTM** and **RoBERTa** ensemble achieving ∼92% accuracy
- Built backend API with **SHAP** explainability and guardrail logic to reduce false positives
- End-to-end pipeline from user input to prediction with confidence scores

AISLA — AI-Powered Virtual Laboratory & Self-Learning Platform for Education

- Built EduTech platform with 25+ guided experiments, **3D virtual labs**, AI-driven lab records, and **voice-enabled AI agent** for doubt clarification
- Developed coding playground with automated **GitHub** integration and **offline-first architecture** with cloud sync
- Integrated interactive learning modules enabling seamless experience across devices

Technical Skills

Programming Languages: Python, Java, C, JavaScript, PHP

Web Technologies & Frameworks: FastAPI, React.js, Node.js, Express.js, Angular, Streamlit

Databases: MongoDB, MySQL, ChromaDB

AI & Machine Learning: PyTorch, TensorFlow, Scikit-learn, Hugging Face, LangChain, LangGraph, FAISS, Ollama

Cloud & DevOps: AWS, Docker, Git/GitHub, Firebase, Render

Developer Tools: Postman, Jupyter Notebook, Google Colab

Achievements & Certifications

Achievements

- 1st Prize, Visionova 2K26 National Hackathon for AISLA (AI Self-Learning Lab Assistant) — EduTech solution
- Runner-Up, CodeSurfers Hackathon 2025 (National; 1,000+ participants) for an assistive navigation platform
- Best Tech Stack Award, Nexovate Innovation Challenge (AI/ML)
- 2nd Prize Tejas Expo Winner 2K25 — National Innovation Showcase
- Top 10 finalist, Hash It Out Season 2 (National; 120 teams) for AI-based AgriTech solution
- Selected participant at INAE Youth Conclave 2025 (MSME focus), a merit-based national engineering conclave