

KARTHIKEYA VEERAMALLU

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Full-Stack Software Engineer with internship experience in React, FastAPI, and PostgreSQL on production systems, and applied Generative AI development using LangChain, RAG, and Gemini API.

EXPERIENCE

Software Engineering Intern

Jan 2025 – Present

Vishwam / IIT Collaborative Program · Hyderabad, India

- Contributed to **eHRS**, a production healthcare platform — implemented React UI components and FastAPI REST endpoints for patient registration and queue-management workflows.
- Fixed CI hook failures and state-machine test breakages, restoring pipeline stability for the team's collaborative development workflow.
- Extended **Playwright E2E test coverage** across patient registration and queue-management flows, improving automated test reliability for critical user paths.
- Implemented axe-compliant accessibility labels and maintained TypeScript code-quality standards across shared frontend modules.
- Reviewed **10+ merge requests** on the Internship Work Tracker; contributed to **FuelReach** via MRs covering help-center, compliance metadata, and mobile UI/UX.

AI & ML Model Design Intern

2023 (2 months)

Indian Servers

- Built supervised ML classification models trained on **5,000+ records**, applying feature engineering and structured data preprocessing pipelines.
- Developed NLP text-processing automation covering tokenization, normalization, and feature extraction to prepare inputs for downstream classification models.

PROJECTS

NNRG AI Campus Assistant

Python · LangChain · ChromaDB · RAG · FastAPI

- Built a **RAG-based** campus chatbot using LangChain and ChromaDB to retrieve institutional knowledge and generate source-grounded responses via a FastAPI backend.
- Implemented distance-aware confidence scoring to filter low-relevance retrievals and improve answer reliability.

AgriBridge

Next.js · FastAPI · PostgreSQL · AI

- Developed a full-stack agriculture marketplace with Next.js frontend, FastAPI backend, and PostgreSQL, supporting farmer-to-buyer transactions, AI crop recommendations, and market pricing.
- Designed REST APIs for crop listing, order management, and AI-driven recommendation workflows.

WhatsApp AI Website Builder

Node.js · Gemini API · WhatsApp Cloud API

- Built a conversational AI system that accepts website requirements via WhatsApp, generates HTML/CSS/JS using Gemini API, and delivers deployable output.
- Integrated WhatsApp Cloud API webhooks with Node.js to manage multi-turn conversation state and LLM prompt construction.

Voice Clarity AI

React 19 · TypeScript · Vite · Gemini API · Firebase

- Developed an AI speech-correction app analyzing pronunciation and grammar issues using Gemini API, with Firebase Authentication and Firestore for persistence.
- Built accessibility-first for elderly users; TypeScript enforced throughout for type-safe architecture.

Saarthi AI — Citizen Platform

Python · LangChain · ChromaDB · RAG · DAG Engine

- Built an AI citizen-assistance platform using LLM intent detection and RAG to handle government-approval queries; implemented a **DAG-based workflow engine** to generate multi-step procedural roadmaps.

EDUCATION

B.Tech — Computer Science & Engineering

2023 – 2027 · CGPA: 7.98

Nalla Narasimha Reddy Engineering College, Hyderabad

TECHNICAL SKILLS

Languages	Python, JavaScript (ES6+), TypeScript, SQL, C
Frontend	React.js, Next.js, Vite, HTML5, CSS3, Tailwind CSS
Backend	Node.js, Express.js, FastAPI, REST APIs
AI / GenAI	LangChain, RAG, ChromaDB, Gemini API, LLMs, NLP, Machine Learning
Databases	PostgreSQL, MongoDB, Firebase
Testing & Tools	Playwright, Git, Linux, Vercel, CI/CD

LEADERSHIP & ACHIEVEMENTS

Head — TechNova Technical Club

Nalla Narasimha Reddy Engineering College

- Lead a five-domain technical club (AI/ML, Web Dev, Cloud, IoT, Cybersecurity), mentoring **100+ students** on technical skills, project development, and career direction.
- Organized technical workshops and coordinated cross-team collaborations; served as **Department Coordinator** for the Annual Technical Fest.
- Received **Best Stall Award** among 20+ teams at the inter-department technical exposition.

CERTIFICATIONS

Programming Fundamentals · Frontend Development — NxtWave