

JARPULA JASWANTH

AI Full Stack Engineer | Generative AI & LLM Integration | MERN Stack
Hyderabad, India | +91 9701445846 | j.jaswanth@icloud.com | www.linkedin.com/in/jjaswanth | github.com/xboybx

PROFESSIONAL SUMMARY

AI Full Stack Engineer and B.Tech graduate with proven expertise building production-grade web applications powered by Generative AI and Large Language Models (LLMs). Skilled in the MERN stack with hands-on experience integrating OpenAI LLM APIs, multi-modal Tool Calls, LangChain agentic pipelines, and end-to-end RAG architectures backed by vector databases. Delivered 8+ full-stack applications including an AI-powered web compiler, a multi-modal RAG chatbot, a real-time collaborative IDE, and a natural language SQL explorer. Deployed on Vercel, Render, and AWS (EC2, Lambda, Elastic Beanstalk). Proven team lead with Agile delivery experience across cross-functional sprints.

TECHNICAL SKILLS

AI & Generative AI: Generative AI, LLMs, OpenAI API, Tool Calls (Web / Image / Code), Prompt Engineering, RAG Architecture, Vector Databases, Embeddings

Frontend: React.js, Next.js, HTML5, CSS3, Tailwind CSS, Responsive UI Design

Backend & Databases: Node.js, Express.js, RESTful API Design, JWT Auth, MongoDB, Mongoose, PostgreSQL, Socket.io

Cloud & DevOps: AWS Fundamentals, Vercel, Render, CI/CD

Languages: JavaScript (ES6+), Python

EXPERIENCE

Full Stack Developer — Team Lead | Kakatiya University Capstone Project Jan 2025 – May 2025

- Led a 4-member team to design, build, and ship a peer-to-peer student freelancing platform from architecture to production across 5 milestone releases.
- Built real-time chat and WebRTC video communication supporting 100+ concurrent users at under 150ms latency; designed tutor-learner matching algorithm with search and filtering.
- Managed Agile sprint planning, code reviews, and task delegation — mentoring team members through technical blockers and delivering all features on schedule.

Web Development Intern | Unified Mentor

Jul 2025 – Sep 2025

- Developed 8+ production-ready MERN stack applications; achieved a measured 25% API response time improvement through MongoDB query optimization and indexing.
- Built accessible, responsive UIs with React.js and Tailwind CSS; participated in Agile sprints, peer code reviews, and CI/CD feature deployments every sprint cycle.

PROJECTS

IRAG — Intelligent RAG Chatbot | *React.js, Node.js, LangChain, OpenAI GPT-4, ChromaDB, Express.js*
<https://github.com/xboybx/IRAG-Rag-System-chatbot>

- Built an end-to-end RAG pipeline — documents are ingested, chunked, embedded into MongoDB Vector across 1000+ chunks, and retrieved via semantic similarity search before every GPT-4 response, achieving 90%+ reduction in hallucinations vs a standard chatbot.
- Integrated all 3 OpenAI Tool Calls: Web Tool (live internet search), Image Tool (vision-based queries), and Code Tool (in-chat code execution) — enabling fully multi-modal requests in a single conversation session.
- Orchestrated agentic LLM flows via LangChain with context-window management, multi-step chained reasoning, and conversation memory; average query response under 2 seconds on Render deployment.

CollabCode — AI Real-Time Collaborative IDE | *React.js, Node.js, Socket.io, OpenAI GPT-4, Monaco Editor*
<https://github.com/xboybx/CollabCode>

- Real-time multi-user code synchronization via Socket.io — 10+ developers co-editing simultaneously at sub-100ms latency with zero conflicts; 50+ concurrent sessions supported in production.
- Integrated LLM AI assistant panel alongside the Monaco editor for contextual code suggestions, debug explanations, and auto-complete — all without leaving the IDE.
- Room-based sessions with unique invite links, live cursor tracking per participant; deployed on Vercel + Render with a WebSocket event architecture optimised for minimal bandwidth.

Tounge — AI Web Compiler & Code Practice Platform | *React.js, Node.js, OpenAI API, Judge0, Tailwind CSS, AWS Lambda*
<https://github.com/xboybx/Tounge-webcompiler>

- Secure multi-language compiler (Python, JS, C++, Java, 8+ languages) with sandboxed execution via Judge0 API — processing 200+ daily submissions; deployed on Vercel with AWS Lambda for burst traffic.
- LLM AI debugging assistant returns context-aware error explanations and fix suggestions — cutting estimated debugging time by 60% for users practising algorithmic problems.
- One-click Big-O Time & Space Complexity Analyser: AI instantly breaks down a user's code complexity on demand — a high-value feature for technical interview preparation.

EDUCATION

B.Tech, Information Technology — **Kakatiya University, Kothagudem** CGPA: 8.5 / 10 | 2021 – 2025

Diploma, Mechanical Engineering — **Govt Polytechnic, Kothagudem** CGPA: 9.47 / 10 | 2018 – 2020

Secondary (X), CBSE — **Nava Bharath School, Kothagudem** CGPA: 8.04 / 10 | 2018