

UMESH CHANDRA TIRUMANI

+91 6303336036 — thirumaniumeshchandra2006@gmail.com — [LinkedIn](#) — [GitHub](#) — [Portfolio](#)

Summary

Final year CS student (May 2027), selected top 1.4% of 40,000+ applicants for a YC-backed engineering accelerator (LeetCode rating: 1497). Shipped two production systems: Code Slayer, a sandboxed multi-language execution engine with process-level resource isolation, and PlaceIQ, a multi-tenant RBAC platform with 65 REST endpoints and optimistic concurrency control. Strong foundation in data structures, algorithm design, and object-oriented systems, reinforced by dedicated Graphs and Dynamic Programming training under senior industry mentors.

Education

Anurag University, Hyderabad

2023 – Present

B.Tech in Computer Science & Engineering

CGPA: 8.44/10

Work Experience

AlgoUniversity (Y-Combinator-backed)

May 2025 – July 2025

Software Engineer Co-op Intern

Remote

- Designed and deployed a sandboxed C++/Python execution engine enforcing hard **TLE/MLE/CE** detection for **150+ students**; implemented resource-limited process isolation and timeout scheduling to prevent runaway submissions from degrading shared infrastructure.
- Shipped **3 production features** across Agile sprints, including a rate-limiting layer that closed abuse vectors on the submission API; each feature cleared code review and deployed within sprint scope.

Slayers (Quick Fashion Delivery Startup)

Jul 2025 – Dec 2025

Software Engineer Intern

Remote

- Designed RESTful microservices for a **60-minute delivery** platform (Try-First-Buy-Later checkout, real-time order tracking, logistics routing); chose a routing pipeline architecture to minimize per-request latency under peak load, with each service deployed independently to production.
- Implemented **Redis**-based caching strategies that cut API response latency by over **40%**; architected **MongoDB** and **PostgreSQL** schemas and deployed services on **AWS**.
- Maintained **CI/CD** pipelines and authored unit/integration test suites across the full deployment lifecycle, ensuring **zero-downtime** releases.

Projects

Code Slayer: Full-Stack Online Judge | *React.js, Node.js, Express.js, MongoDB, Docker, AWS* [Source Code](#) — [Live Demo](#)

- Enforced hard resource limits (**1,000ms timeout, 256MB RAM**) via process-level sandboxing across two microservices on **AWS EC2/ECR** and **Render**, isolating untrusted user code execution from the host system; serving **50+ active users**.
- Built a **3-scenario Gemini AI reviewer** with custom prompts per verdict (Accepted, Wrong Answer, Edge Case Fail) and **JWT** + **RBAC** auth backed by indexed **MongoDB** schemas delivering **sub-200ms** verdict latency end-to-end.

PlaceIQ: Multi-Tenant Placement Platform | *React, Node.js, MongoDB, FastAPI, Docker*

[Source Code](#) — [Live Demo](#)

- Chose **4-tier hierarchical RBAC** (Super Admin → College Admin → Coordinator → Student) over flat per-endpoint ACLs to avoid duplicating permission rules across **10 tenants**; a single upward tree-walk resolves access instead of maintaining N separate rule sets per college.
- Built a **hybrid ATS resume-scoring** pipeline: rule-based synonym matching runs on every submission, with **OpenRouter** AI review firing on-demand only, since scoring every resume through an LLM would have been too slow and costly at scale; backed by a **Python/FastAPI** scraper microservice and **22 passing Jest/Supertest** tests in CI.

Technical Skills

Core CS: Data Structures & Algorithms, Object-Oriented Design, Complexity Analysis

Languages: C++, Java, Python, JavaScript

Systems & Backend: Distributed Microservices, REST APIs, WebSockets, Redis, Docker

Cloud & Infrastructure: AWS (EC2, ECR), Render, Cloudinary

Databases: MongoDB, MySQL, PostgreSQL

Frameworks: Node.js, Express.js, FastAPI, React.js

AI & Integrations: LangGraph, Multi-agent Pipelines, Gemini API, OpenRouter API, Twilio API

Achievements & Certifications

- AlgoUniversity Accelerator** (Y-Combinator-backed), Mar 2025 – Aug 2025 – Selected **top 1.4% of 40,000+** applicants; mentored by senior engineers from **Google, Apple, Grab, and Alphagrep** through intensive **Graphs and Dynamic Programming** camps focused on production-grade system design.
- Competitive Programming** – LeetCode rating **1497**, 250+ problems solved. [LeetCode](#) — [HackerRank](#)
- Independent Research** – Co-authoring cognitive AI architecture papers (S-DAM, CTAM, DAM) on attention and memory mechanisms, targeting workshop submission.
- Google Cloud Skills Boost** – 25 skill badges spanning Gemini Application Development, Multimodal RAG, MLOps for Generative AI, and Responsible AI. [Public Profile](#)
- Hackathons** – Owned the LangGraph multi-agent architecture for a team-built 6-agent supply chain pipeline at **Google Agentathon** (15,000+ participants) and competed in 3+ inter-college hackathons; shipped working prototypes under 24-hour deadlines.