

Gulapala Shiva Kumar

+91 8978991415 | shivagulapala2005@gmail.com | linkedin.com/in/shivagulapala
github.com/Shiva-gsk | leetcode.com/u/Shivag_sk/ | shivagulapala.space

Education

National Institute of Technology, Calicut

CGPA: 9.29 / 10

B.Tech in Computer Science and Engineering, Minor in Cyber Physical Systems

Aug. 2023 – Anticipated May 2027

- **Relevant Coursework:** Operating Systems, Computer Networks, Data Structures & Algorithms, Database Management Systems

Technical Skills

Languages: C, C++, Python, SQL, JavaScript (Node.js, React)

Systems & Tools: Linux, Unix, Git, GitHub, Linux System Programming, TCP/IP Sockets, epoll/I/O Multiplexing, HTTP, Debugging, Tracing & Diagnostics, Scripting/Automation

ML & Data: NumPy, Pandas, Scikit-learn, HuggingFace Transformers, Model Fine-tuning & Inference Optimization, PostgreSQL, Relational Databases

Web & Frameworks: Next.js, React.js, FastAPI, REST APIs, Prisma ORM

Concepts: Operating Systems, Computer Networks, Concurrency & Event-Driven Design, Data Structures & Algorithms, OOP, DBMS, Performance & Scalability

Experience

Project Intern

May 2026 – July 2026

Oracle India Private Limited

Bengaluru, India

- Developed components of a flexible **multi-agent orchestration framework** for coordinating agent workflows in production.
- Designed and built an interactive **debugging, tracing, and diagnostics** architecture supporting **checkpoint inspection, state tracing, and runtime intervention** for **production** workflows serving **20K+ enterprises**.
- Integrated an AI-powered **Root Cause Analysis (RCA) agent** to analyze failures and pinpoint likely failure sources, estimated to reduce debugging effort for developers and improve workflow reliability.

Web Developer Intern

Jan. 2025 – Mar. 2025

National Institute of Technology, Calicut

Calicut, India

- Collaborated in a team of 7 to design and develop the official **hostel management website** for NIT Calicut.
- Built reusable **React components** to improve user experience and streamline development using **Git**-based team workflows.

Projects

eXpServer – Event-Driven Web Server | C, Linux, TCP/IP, epoll, HTTP

[GitHub](#)

- Built an asynchronous HTTP server in C on Linux using TCP sockets and an event-driven architecture, with explicit memory and buffer management.
- Implemented non-blocking socket I/O using edge-triggered epoll to manage concurrent client connections without a thread-per-connection model.
- Designed modular components for the event loop, connection lifecycle, buffers, upstream communication, and session management.
- Implemented reverse proxying and load balancing to distribute incoming requests across upstream servers.
- Built an automated benchmarking harness in **Node.js** using **Dockerode** to launch eXpServer in an isolated **Docker** container and measure **request latency**, **CPU** and **memory utilization** under load, enabling repeatable performance and resource-usage testing.

Product Review Text Summarizer | Python, HuggingFace Transformers, Gradio, Colab

[Live Demo](#) | [GitHub](#)

- Fine-tuned the **T5-small** transformer on custom review data, improving **ROUGE score by 71%**.
- Reduced inference latency and handled variable-length inputs via pre-processing and batch management.

DigiWallet | Next.js, Node.js, Prisma ORM, PostgreSQL, Stripe, Clerk

[Live Demo](#) | [GitHub](#)

- Built a full-stack digital wallet for balances, fund transfers, and transaction history backed by a **PostgreSQL** relational schema.
- Integrated **OAuth 2.0** authentication (Clerk) and **Stripe.js** payments, tested end-to-end in sandbox mode.

Achievements & Involvement

- Secured **2nd place** in the **Debugger** coding competition at **Tathva 2024**, NIT Calicut's annual technical fest.
- Member, **GDSC NITC** (Jan. 2025 – Present): internal hackathons, peer-led sessions; active in AI, Web Dev, and Competitive Programming sub-teams.
- Member, **AI Club, NITC** (Oct. 2024 – Present): 10+ research discussions and paper-reading sessions.