

# KOTHAKAPU VISHNU KIRAN

Software Engineer | Backend & Full Stack Developer

+91 6309535604 | kothakapuvishmukiran@gmail.com | LinkedIn | GitHub | Leetcode

## Education

### Indian Institute of Information Technology and Management

*Integrated B.Tech + MBA in Information Technology*

*Coursework: Object-Oriented Programming, Data Structures, Database Systems, Operating Systems, Computer Networks*

Aug 2023 - May 2028

Gwalior, Madhya Pradesh

## Technical Skills

**Languages:** Python, JavaScript, TypeScript, Go, C/C++, SQL, Solidity, Bash

**Frameworks & Libraries:** React.js, Next.js, Node.js, Express.js, React Native, FastAPI

**Databases & Cloud:** PostgreSQL, MongoDB, Redis, AWS, Docker, Kubernetes, GitHub Actions

**Blockchain:** Solidity, Web3.js, Ethers.js, Foundry, Polygon Testnet

**Tools:** Postman, Prometheus, Git, Linux, Terraform, Jenkins

## Professional Experience

### Neural Network Labs

Hyderabad, India (Remote)

*Full Stack Developer Intern*

May 2025 - August 2025

- Developed full-stack features for AI-powered content generation workflows (meme, infographic, and ad creation) using **React** and **Konva.js**, delivering an interactive canvas-based UI/UX editor.
- Integrated machine learning models via **FastAPI** REST APIs, building a **Node.js** middleware layer (models, controllers, routes) to bridge ML services with React frontend workflows.
- Deployed and maintained cloud infrastructure across **AWS** (frontend hosting) and **Linode & DigitalOcean** (ML model serving), ensuring high availability and horizontal scalability.
- Optimized API response pipeline in collaboration with ML engineers, reducing end-to-end API latency by **25%**.

## Projects

### Atlas - Self-Healing Distributed Cache | *Go, Consistent Hashing, WAL, Distributed Systems*

Jun 2026

- Architected a distributed in-memory key-value cache in **Go** implementing consistent hashing, request routing, partition replication, and concurrent node communication for horizontally scalable data distribution across multiple nodes.
- Built self-healing cluster capabilities including **heartbeat-based failure detection**, automatic failover, replica routing, and incremental operation-log recovery to maintain high availability and consistency during node failures.
- Engineered durable storage using **Write-Ahead Logging (WAL)**, periodic snapshots, and crash recovery mechanisms ensuring data persistence, fast startup reconstruction, and fault-tolerant operation across distributed nodes.

### QueueForge - Distributed Job Queue System | *Go, PostgreSQL, Redis, Prometheus, Docker*

Mar 2026

- Built a **distributed task processing system** using Redis-backed worker pools supporting high-throughput asynchronous job execution with horizontal scalability, configurable concurrency, and priority-based task scheduling.
- Engineered **fault-tolerant retry mechanisms** and worker-pool concurrency management ensuring reliable job execution, graceful recovery under partial system failures, and zero message loss guarantees.
- Integrated **Prometheus observability layer** exposing 10+ real-time metrics including queue depth, job throughput, worker utilization, and failure rates enabling proactive production monitoring and alerting.

## Achievements

- HackByte 4.0:** Won 2 sponsor-track prizes in a 36-hour national hackathon among 6,500+ participants.
- Problem Solving:** Solved 300+ DSA problems across LeetCode, Codeforces, and GeeksforGeeks covering arrays, graphs, dynamic programming, and trees.
- Hacktoberfest'25:** Earned the Super Contributor Badge with 12+ merged open-source pull requests.

## Leadership / Extracurricular

- Project Lead & Maintainer:** Led an open-source project with 100+ contributors, managing feature development, code reviews, issue tracking, and production deployments.
- Mentor & Reviewer - SSoC'26:** Reviewed 50+ PRs and mentored 20+ contributors across open-source projects, with 80% of mentees successfully merging their first contribution.
- Design Team Lead - Urja'26:** Led a 8-member design team for IIITM Gwalior's annual sports fest, delivering all event branding and digital assets on schedule.