

# Mandala Vishnu Vardhan Reddy

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## PROFESSIONAL SUMMARY

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Backend-focused Software Engineer with experience building scalable distributed systems and cloud-native applications using Node.js, TypeScript, Rust, PostgreSQL, Redis, Docker, and Kubernetes. Skilled in designing high-performance APIs, microservices, caching systems, and CI/CD pipelines. Passionate about backend architecture, system design, and building reliable developer-focused platforms.

## EXPERIENCE

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### Software Developer Intern

Vyuha | Vijayawada, India

Nov 2024 – Feb 2025

- Developed and maintained high-performance REST APIs using Node.js and Express.js, ensuring secure and reliable data access in a production environment
- Architected a modular backend system that boosted scalability, and maintainability, enabling faster development.
- Optimized database queries and indexing strategies, reducing API response latency and improving throughput under concurrent traffic.
- Containerized backend services using Docker and deployed applications on Kubernetes clusters with Horizontal Pod Autoscaling (HPA) to handle dynamic production workloads.
- Collaborated with cross-functional teams to troubleshoot issues and improve system performance
- Built and automated CI/CD pipelines using GitHub Actions, enabling streamlined build, testing, and Kubernetes-based deployment workflows with reduced manual intervention.
- Implemented unit and integration tests with Vitest.

## PROJECTS

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### Cloud-Native Competitive Programming Platform

- Designed and developed a scalable web platform using Next.js and PostgreSQL, supporting secure multi-user workflows with role-based access control (RBAC).
- Enhanced system performance by implementing Redis caching, query optimization, and indexing to reduce latency and database load.
- Implemented asynchronous judge workers using RabbitMQ for scalable code evaluation.
- Added SSE based real-time submission updates
- Built and deployed containerized microservices using Docker and Kubernetes, leveraging HPA and KEDA for auto-scaling based on workload metrics.
- Enforced API security practices including rate limiting and input validation to ensure system stability under high traffic.

### Maguva Handlooms- E Commerce Platform

- Built a scalable full-stack e-commerce platform using Next.js, Prisma ORM, and Redis, leveraging SSR and API routes for a unified architecture and seamless user experience.
- Optimized performance with database normalization, indexing, and Redis caching, reducing latency and enabling efficient handling of high concurrent traffic.

### Samyak 2025 — Event & Fest Management Platform

- Built a full-stack event management system using React.js, Node.js, Redis, and Multer, enabling streamlined participant and organizer workflows.
- Improved backend reliability through security middleware, validation layers, and API rate limiting, ensuring stable performance during peak event traffic.
- Developed an intuitive dashboard enabling organizers to manage participants, track activity, and distribute certificates in real-time.

## EDUCATION

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### B.Tech in Computer Science and Engineering

KL University, Vijayawada, India

CGPA: 9.1 / 10

Expected Graduation: 2027

### Intermediate

Narayana Junior College, Hyderabad, India

GPA: 9.4 / 10

## SKILLS & TECHNOLOGIES

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**Languages:** Java , JavaScript , TypeScript , Rust

**Frontend:** React.js, Next.js,HTML,CSS

**Backend:** Node.js, Express.js, Actix Web, tRPC, gRPC, WebSockets

**Databases:** PostgreSQL, MySQL, MongoDB, Redis

**Cloud & DevOps:** Docker, Kubernetes, Jenkins, GitHub Actions, AWS Lambda, Cloudflare Workers

**Messaging & Streaming:** Apache Kafka, RabbitMQ

**Testing :** Vitest, Junit

**Observability & Monitoring:** Prometheus, Grafana