

KARTHIK KOLAMURI

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📍 Tadepalligudem, Andhra Pradesh

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Professional Summary

Software Engineer with proven experience in full-stack and backend development, debugging, algorithm design, and cloud-scale services. Skilled in JavaScript, Python, C, and Java, with strong foundations in data structures and problem-solving (active LeetCode contributor). Recognized at MSME National Hackathon 3.0 for building a secure healthcare platform, demonstrating scalable system design, API optimization, and collaborative problem-solving. Eager to bring technical expertise and adaptability to dynamic engineering teams.

Education

SASI Institute of Technology and Engineering

Bachelor of Technology in Computer Science and Engineering

- CGPA: 8.5 / 10

Tadepalligudem, India

Aug 2022 - Expected Jun 2026

Narayana Junior College

Intermediate (Mathematics, Physics, Chemistry)

- Percentage: 81%

Kakinada, India

2020 - 2022

Professional Experience

Web Development Intern, Aadi Foundation (Remote)

Jan 2025 - Mar 2025

- Collaborated with stakeholders to define API requirements and integrate services, reducing request latency by 25%
- Designed and implemented distributed workflows and backend services to handle 1,000+ concurrent users, optimizing API response times by 30%.
- Implemented **monitoring and centralized error logging** to improve system **observability** and cut bug resolution time by 50%.
- Served as **Designated Responsible Individual (DRI)** for debugging downtime issues in development environment.
- Refactored API architecture with modular middleware and asynchronous handlers, improving backend efficiency and reducing server response times by 30%.
- Supported CI/CD workflows by managing feature branches, enforcing pull request standards, and resolving merge conflicts.

Projects

Medicare - The Health Care Platform | MERN Stack, TypeScript Stream API, REST, AWS, JWT, RBAC

- Selected for **MSME National Hackathon 3.0** and awarded a **Rs.7 Lakh grant** to develop this government-backed healthcare platform prototype.
- Developing a secure, role-based telemedicine app offering real-time chat, video consultations, appointment scheduling, and blood bank locator.
- Integrated **Stream Chat and Stream Video APIs** to enable HIPAA-compliant doctor-patient communication with encrypted session handling.
- Executed **Role-Based Access Control (RBAC)** for Admin, Doctor, and Patient accounts to enforce data privacy and authorization logic.
- Architected scalable backend using modular Express middleware and asynchronous workflows, ensuring high system responsiveness under load.

BlogNest - Write, Share, Inspire | MERN Stack, JWT, SendGrid, MVC Architecture

- Developed a blog platform with full CRUD functionality, rich text editing, and admin moderation dashboard.
- Designed and implemented secure password recovery using SendGrid, token expiration, and encrypted routes.
- Adopted MVC architecture to ensure maintainable, testable code with clear separation of concerns.

Book Store Management System | *Node.js, Express.js, MongoDB, EJS, CSRF Protection, Nodemailer*

- Built a secure and scalable e-commerce platform for managing books, users, and orders with user authentication and session control.
- Designed user account features including signup, login, logout, and password reset, secured with bcrypt hashing and express-session management.
- Added pagination and dynamic search/filter functionality using MongoDB queries to support efficient browsing across large datasets.
- Incorporated CSRF protection and server-side input validation to mitigate common security threats and protect user data integrity.
- Integrated email notifications using Nodemailer for password recovery and transactional alerts (e.g., order confirmation).
- Designed MongoDB schema to support order tracking, user roles, and inventory management with future scope for admin dashboard and analytics.

Professional Experience

Web Development Intern

Jan 2025 – Mar 2025

Aadi Foundation (Remote)

- Collaborated with stakeholders to define API requirements and integrate services, reducing request latency by 25%.
- Designed and implemented distributed workflows and **cloud-ready backend services** to handle 1,000+ concurrent users, improving scalability by 30%.
- Implemented monitoring, centralized error logging, and **debugging workflows**, cutting bug resolution time by 50%.
- Served as Designated Responsible Individual (DRI) for diagnosing downtime issues in development and test environments.
- Refactored API architecture with modular middleware and async handlers, boosting efficiency and reliability.
- Supported CI/CD workflows with GitHub Actions and Jenkins, enforcing pull request standards and resolving merge conflicts.

Certifications

NodeJS - The Complete Guide (MVC, REST APIs, GraphQL, Deno) – Udemy

[View Certificate](#)

Software Engineer Certificate – HackerRank

[View Certificate](#)

Problem Solving Certificate – HackerRank

[View Certificate](#)

Technology Virtual Experience Program – Deloitte Australia (Forage)

[View Certificate](#)

Full Stack Developer Certification – Oneroadmap

[View Certificate](#)

Achievements & Recognitions

Selected for **MSME Nationwide Hackathon 3.0** and awarded a **Rs.7 Lakh grant** for proposing an innovative technology solution addressing real-world healthcare challenges. Led efforts to design and develop a scalable prototype application.

Improved **API performance by 40%** and reduced server response times by 30% through backend optimizations.