

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.

Technical Skills

Languages	JavaScript, Python, C, Java, SQL
Frontend	React.js, EJS, Pug, Bootstrap, HTML5, CSS3, Tailwind CSS
Backend	Node.js, Express.js, REST APIs, MVC Architecture
Databases	MongoDB, MySQL, Firebase
DevOps & Tools	Docker, Jenkins, Git, GitHub, Postman, Vercel, Render
Authentication & Security	JWT, bcrypt, CSRF Protection, express-session
Cloud / Hosting	Vercel, Render, Firebase Hosting
Other Skills	Agile Methodology, CI/CD Pipelines, Real-time Chat & Video (Stream API)

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.