

# KARTHIK KOLAMURI

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Tadepalligudem, Andhra Pradesh

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## Professional Summary

Motivated Software Engineer with experience in full-stack and backend development. Proficient in collaborating with teams to define requirements, solve complex problems, and deliver secure, maintainable solutions. Recognized at the MSME National Hackathon 3.0 for developing an impactful healthcare platform, demonstrating strong problem-solving abilities and practical design skills. Active open source contributor committed to collaborative development and continuous learning. Eager to apply technical expertise and a proactive approach within a dynamic engineering environment.

## 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

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- **Programming Languages:** JavaScript, Python, C, Java, SQL
- **Frameworks & Libraries:** Node.js, Express.js, React.js, Tailwind CSS, Bootstrap, HTML5, CSS3, EJS, Pug
- **Databases:** MongoDB, MySQL, PostgreSQL, Firebase
- **DevOps & Tools:** Git, GitHub, Docker, Jenkins, Postman, Kubernetes.
- **Security & Authentication:** JWT, bcrypt, CSRF Protection, express-session
- **Cloud Platforms:** AWS, Firebase Hosting, Render, Vercel
- **Core Strengths:** REST APIs, CI/CD Pipelines, Agile, System Monitoring, Observability, Reliability Engineering, OOP & Design Patterns, Test Automation

### Certifications

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**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

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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.