KARTHIK KOLAMURI

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Professional Summary

Backend Full Stack Developer with 2+ years of experience in building and scaling backend systems, leading projects, and mentoring peers. Recognized at MSME Hackathon with a 7 Lakh grant for developing a healthcare platform. Skilled at driving outcomes, simplifying complex problems, and ensuring high-quality technical execution. Passionate about creating AI-native, scalable systems and nurturing collaborative engineering cultures.

Education

SASI Institute of Technology and Engineering Tadepalligudem, India
Bachelor of Technology in Computer Science and Engineering *Aug 2022 – Expected Jun 2026*
- **CGPA:** 8.5 / 10
- **Relevant Coursework:** C Programming, Python, Data Structures and Algorithms (C), Introduction to Computer Science II, Operating Systems, Computer Networking

Narayana Junior College Kakinada, India
Intermediate (Mathematics, Physics, Chemistry) *2020 – 2022*
- **Percentage:** 81%

Leadership & Ownership Highlights

- **Team Ownership & Mentorship:** Led Git-based workflows across 10+ feature branches at Aadi Foundation, ensuring code quality, mentoring junior contributors, and driving CI/CD stability.

- **Driving Outcomes:** Improved API performance by 40% and reduced server response times by 30%, directly impacting scalability and customer experience.

- **Problem Simplification:** Refactored backend architecture into modular middleware and async workflows to streamline complexity and improve maintainability.

- **Hackathon Leadership:** Spearheaded team development of *Medicare*, an award-winning healthcare platform, by coordinating backend, frontend, and security modules.

- **Culture & Collaboration:** Thrived in distributed, remote-first setups; contributed to open-source projects and maintained cross-functional collaboration.

Projects

Medicare - The Health Care Platform | *MERN Stack, Stream API, REST, AWS, JWT, RBAC*
- Selected for **MSME National Hackathon 3.0** and awarded a **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 Credibility

Backend & Distributed Systems: Node.js, Express.js, NestJS, Microservices, RESTful API Design, Async Workflows
Cloud & Infrastructure: Kubernetes (beginner), Docker, AWS (EC2, S3, RDS), Jenkins, CI/CD Pipelines, Observability Tooling
Data Systems: MongoDB, PostgreSQL, MySQL, Firebase; Metadata Management (conceptual), Apache Iceberg (familiarity)
Security: JWT, RBAC, CSRF Protection, bcrypt, Secure Credential Management (Password Management System Project)
AI-Native Workflows: GitHub Copilot, ChatGPT (coding, debugging, testing, rapid learning), Stream Chat/Video APIs Integration

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 **7 Lakh grant** for proposing an innovative tech solution addressing real-world healthcare challenges.

Recognized for problem-solving capabilities and entrusted with scaling the prototype under a government-backed initiative.