

# KARTHIK KOLAMURI

**Phone:** +91 9182615101

**LinkedIn:** [linkedin.com/in/karthik-kolamuri-a63b87340](https://www.linkedin.com/in/karthik-kolamuri-a63b87340)

**Email:** [karthik.kolamuri@sasi.ac.in](mailto:karthik.kolamuri@sasi.ac.in)

**GitHub:** [github.com/karthik-kolamuri](https://github.com/karthik-kolamuri)

## Professional Summary

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Backend-Focused Full Stack Developer with 2+ years of experience architecting scalable APIs and systems using **Node.js**, **NestJS**, and **Express.js**. Proven ability to cut API latency by 40% and optimize response time through modular middleware and async patterns. Strong grasp of building secure authentication flows with **JWT**, **bcrypt**, and role-based access control (RBAC). Developed real-time chat, notification, and session systems mimicking Slack workflows, ideal for building conversational support platforms. Awarded 7 Lakh grant at **MSME Hackathon 3.0** for delivering a government-backed telehealth platform integrating live chat and triaged support rooms. Enthusiastic about building developer-first platforms and bridging communication gaps through smart backend engineering.

## Education

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### SASI Institute of Technology and Engineering

*Bachelor of Technology in Computer Science and Engineering*

Tadepalligudem, India

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

*Intermediate (Mathematics, Physics, Chemistry)*

Kakinada, India

2020 – 2022

- **Percentage:** 81%

## Internship

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### Web Developer Intern

*Aadi Foundation (Remote)*

Jan 2025 – Mar 2025

- Developed and deployed scalable RESTful APIs using Node.js and Express, enabling seamless integration between services and reducing request latency by 25%.
- Built a robust authentication system using bcrypt and express-session, supporting 1,000+ concurrent user sessions with secure credential management.
- Maintained Git-based workflows, managing over 10 feature branches; enforced pull request standards and resolved merge conflicts to ensure CI/CD stability.
- Refactored API architecture with modular middleware and asynchronous handlers, improving backend efficiency and reducing server response time by 30%.
- Implemented centralized error logging with custom middleware, accelerating issue identification and cutting bug resolution time in half.

## Projects

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### Medicare - The Health Care Platform | MERN Stack, Stream API, REST, 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 Skills

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**Languages:** JavaScript (ES6+), TypeScript, Python, C, Java, SQL

**Backend Frameworks:** Node.js, NestJS, Express.js, REST APIs, Modular Middleware, MVC Architecture

**Frontend:** React.js, EJS, Pug, Bootstrap, HTML5, CSS3

**Databases:** MongoDB, PostgreSQL, MySQL, Firebase

**Auth & Security:** JWT, bcrypt, CSRF Protection, express-session, RBAC

**DevOps/Tools:** Docker, Git, GitHub, Postman, Jenkins, Vercel, Render

**Cloud Integrations:** Firebase Hosting, Slack APIs (conceptual), Webhooks, SendGrid, Nodemailer

**Practices:** CI/CD Pipelines, Agile Methodology, Microservices (basics), Async Workflows, Error Logging

## 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 **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.