

# NAVEEN KUMAR M E

Software Engineering Intern | Backend & Systems  
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## EXECUTIVE SUMMARY

Backend-focused Computer Science Engineer skilled in building API-driven systems, serverless cloud workflows, and data-centric automation. Experienced in Node.js, Express, PostgreSQL, Firebase, and Google Cloud Functions with strong foundations in security, networking, and DevOps basics. Built production-style systems across learning platforms, booking automation, RBAC security, and workflow optimization demonstrate the ability to ship reliable backend solutions. And am Currently transitioning backend engineering expertise into the .NET ecosystem, actively learning C#, .NET Core, and Azure development to expand backend capabilities. Strong foundation in API design, system architecture, and Cloud workflows enable fast adaptability

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## TECHNICAL SKILLS

**Programming Languages:** C, Java, Python, JavaScript (Node.js), SQL

**Backend & Systems:** Node.js, Express.js, REST APIs, OOP, Multi-threading basics

**Databases & Data:** PostgreSQL, SQL (joins, transactions), Data Lakes (conceptual), Databricks (intro familiarity)

**Cloud & Infrastructure:** Azure (foundational), GitHub Actions (CI/CD), Basic DevOps workflows, Container fundamentals

**Tools & Versioning:** Git (version control), GitHub, VS Code, Postman, Linux/WSL

**Architectural Awareness:** Microservices basics, API Design, Systems Thinking

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## EXPERIENCE

### Software Engineering Virtual Experience

Dec 2025

#### JPMorgan Chase & Co. Forage

- Integrated Kafka into a Spring Boot microservice to consume and dehydrate high-volume transaction messages using configurable topics and embedded Kafka test framework.
- Implemented transaction persistence with Spring Data JPA and H2 SQL — entity modelling, balance updates across relational User records.
- Connected to external REST Incentive API via Rest Template; built JSON endpoint through a Spring controller with clean architectural boundaries. Verified with Maven test suites.

### Technology Software Development Virtual Experience

Jan 2026

#### Citi · Forage

- Modelled loan management workflows with UML state diagrams; researched ML credit risk assessment systems
- built a Java tool for real-time stock market risk visualization.

### Backend Engineer — Independent Projects

Jan 2024 – Present

#### Self-Driven

- Designed and shipped 4 backend systems covering booking automation, RBAC security, seat allocation, and a serverless AI learning platform.
- Integrated GitHub Actions CI workflows: optimized Firestore and PostgreSQL read/write patterns for production-style reliability.

**IIC Member**

**Sept 2024 – Present**

**Nandha Engineering College**

- Collaborated on AI-driven innovation projects and technical workshops within the Institute Innovation Council.
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## **PROJECTS**

### **Exam Hall Seat Allocation Engine**

*Node.js · PostgreSQL · Express*

- Deterministic algorithm allocating seats for 1,000+ students across multiple subject cohorts with zero conflicts.
- Automated Excel/PDF export pipeline, eliminating manual admin planning workflow; normalized DB schema with heavy SQL joins for conflict-free multi-room report generation.

### **TurfZone -Real-Time Booking Engine**

[github.com/naveencmy/truf\\_world](https://github.com/naveencmy/truf_world)

*Node.js · PostgreSQL · Express*

- Engineered optimistic locking within PostgreSQL transactions — DB constraint rejects a second concurrent request milliseconds later, preventing double-booking at the transaction layer.
- Automated booking confirmation flow and built dynamic admin configuration features.

### **RBAC Middleware System**

[github.com/naveencmy/Role\\_base\\_access](https://github.com/naveencmy/Role_base_access)

*Node.js · Express · JWT*

- Middleware decodes JWTs, verifies signatures against rotated keys, and checks roles against a cached permission matrix before any request reaches business logic.
  - Enforces strict data boundary isolation per user role across all API routes.
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## **CERTIFICATIONS**

- Cloud Computing — NPTEL(2026)
  - Cyber Security and Privacy — NPTEL (2025)
  - Masters in Essential DevOps — GUVI (2024)
  - Introduction to Networking — NVIDIA (2024)
  - AI for All: Basics to GenAI — NVIDIA (2024)
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## **EDUCATION**

**Bachelor of Computer Science and Engineering**

**2024-2028**

*Nandha Engineering College, Erode*

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## **SOFT SKILLS**

- Teamwork
- Problem-Solving
- Adaptability
- Communication
- Time Management