Md. Navidul Hoque

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Professional Summary

Motivated and detail-oriented Backend Developer with experience in building scalable and secure backend systems using Node.js and NestJS. Skilled in database design (PostgreSQL, MySQL), API development, and event-driven architecture. Enthusiastic about integrating AI models into backend systems to build intelligent applications. Passionate about writing clean, maintainable code and continuously learning cutting-edge backend and AI technologies.

Technical Skills

- Languages: TypeScript, JavaScript
- Backend Frameworks: Node.js, Express.js, NestJS
- Architecture & Patterns: Microservices, REST APIs, Event-Driven Architecture
- Databases & ORMs: PostgreSQL, MySQL, MongoDB, Prisma ORM, Mongoose, phpMyAdmin
- Messaging & Queues: Redis, BullMQ, Apache Kafka, WebSocket, Cron Jobs
- DevOps & Cloud: Docker, Cloudinary
- Security & Authentication: JWT, OAuth2, Role-Based Access Control (RBAC), Rate Limiting
- Payments & Integrations: Stripe Connect, OpenAI
- Version Control & Dev Tools: Git, GitHub, Postman, Visual Studio Code

Projects

Doctors Appointment Booking System

Stack: NestJS, TypeScript, PostgreSQL, Prisma ORM, Redis, BullMQ, Apache Kafka, WebSocket, Stripe Connect, Docker, Cloudinary, Cron Jobs, JWT, REST API, OpenAI

Github Repository

- Built real-time chat & notifications using WebSocket, Redis, and BullMQ, supporting 1,000+ concurrent users.
- Implemented asynchronous data processing with Apache Kafka, handling 10K+ traffic events daily.
- Automated appointment updates, background jobs, and activity tracking with BullMQ and Cron Jobs, decreasing manual effort by 30%.
- Integrated Stripe Connect for secure multi-vendor payments, enabling instant payouts to 50+ doctors.
- Optimized performance with Redis caching and rate limiting, reducing API response time by 60% and preventing abuse.
- Increased user engagement by implementing email/SMS notifications, improving response rates by 25%.
- Containerized the platform with Docker, ensuring consistent development environments with Redis, PostgreSQL, and Kafka.
- Integrated OpenAI with MCP server to power AI-driven chat assistance, appointment recommendations, and automated responses for patients and doctors.

AI Powered Document Assistant System

Stack: NestJS, TypeScript, PostgreSQL, Prisma ORM, JWT, Docker, OpenAI, Cloudinary, REST API Github Repository

- Developed AI-powered document processing backend using NestJS, enabling intelligent document management and retrieval.
- Integrated OpenAI APIs to generate summaries and insights from uploaded documents, improving information extraction efficiency.
- Built file upload and storage system using Cloudinary, supporting images, PDFs, and videos in a unified workflow.
- Containerized PostgreSQL with Docker, maintaining consistent development and deployment environments across services.
- Applied logging and error monitoring with NestJS Logger, ensuring easier debugging and system reliability.

Professional Experience

Backend Software Engineer

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- Implemented authentication and authorization systems with JWT and OAuth2 (Google, Facebook).
- Designed and optimized REST APIs for production environments with 99.9% uptime.
- Developed performance-focused backend services for internal tools, increasing operational efficiency.
- Improved maintainability and scalability by applying clean architecture principles.

Education

- B.Sc. in Computer Science & Engineering Military Institute of Science and Technology (MIST), 2020–2024 | Medium: English
- HSC Dhaka Residential Model College, 2017-2019
- **SSC** Dhaka Residential Model College, 2015–2017

References

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