

Md Mahadi Hassan

Senior Backend Engineer · Backend Architecture · Distributed Systems

Fintech · Enterprise SaaS · Healthcare · AI & Automation · OTT & Digital Media · Manufacturing & ERP · EdTech
01.mahadi@gmail.com · +8801792239667
31mahadi.vercel.app · github.com/31mahadi · linkedin.com/in/31mahadi

PROFESSIONAL SUMMARY

Senior Backend Engineer with 6+ years of experience designing, building, and operating scalable production backend systems across fintech, healthcare, SaaS, AI, OTT, manufacturing, and EdTech. Strong expertise in TypeScript, Node.js, NestJS, Go, PostgreSQL, Redis, Kafka, microservices, event-driven architecture, and cloud platforms. Experienced across technical design, implementation, integration, deployment, production support, performance optimization, reliability, and maintainability.

CORE EXPERTISE

Backend Engineering	TypeScript, JavaScript, Node.js, NestJS, Express, Fastify, Hono, Go, REST APIs	Architecture & Distributed Systems	Microservices, distributed systems, event-driven architecture, shared services, clean architecture, system design
Databases & Data Access	PostgreSQL, MySQL, MongoDB, DynamoDB, Redis, Microsoft SQL Server, IBM DB2, TypeORM, Sequelize, Drizzle ORM	Messaging & Real-Time	Apache Kafka, BullMQ, Socket.IO, real-time communication
Cloud & Production	AWS, Azure, Docker, Amazon EKS, Kubernetes, GitHub Actions, Nginx, Terraform, CloudFormation	AI Platform & LLM Integration	LiteLLM, OpenRouter, AI service integration, model/provider orchestration
Observability & Reliability	Datadog, Prometheus, Grafana, Sentry, PostHog, OpenTelemetry, production troubleshooting	Security & Quality	JWT, refresh tokens, RBAC, MFA, Snyk, FOSSA, SonarCloud/SonarQube
AI-Augmented Engineering	Claude Code, Cursor, GitHub Copilot, ChatGPT, Gemini; AI-assisted coding, refactoring, debugging, testing, documentation	Engineering Leadership	Technical design, code reviews, mentoring, performance optimization, cross-functional collaboration

CURRENT ENGINEERING WORK

Sonali Pay - Multi-Country Remittance & Financial Platform

NestJS | Azure | Banking Integrations | MFS Integrations | Multi-Country / Multi-Channel / Cross-Corridor

Backend engineering for a multi-country financial platform spanning remittance workflows and bank/MFS integrations.

Developing and supporting modular NestJS backend services for interconnected financial applications across multiple countries, channels, and remittance corridors, including service and integration flows connecting multiple-country banks and mobile financial service (MFS) providers within an Azure-based cloud ecosystem.

VelaCrew.ai - AI Operations Platform

TypeScript | Hono | Drizzle ORM | PostgreSQL | Docker | AWS | EKS | LiteLLM | OpenRouter

Backend development for AI-powered workflow automation and enterprise system integration.

Building modular backend services and APIs, integrating external services and AI-powered workflows, implementing secure authentication and authorization, and supporting containerized AWS deployment plus LLM integration patterns using LiteLLM and OpenRouter for multi-provider AI capabilities.

PB Play - End-to-End OTT Platform Ecosystem

Go | NestJS | Next.js | Media Management | Playlists | Monetization | Web / Android Player | iOS / tvOS SDKs

Backend engineering within a complete OTT ecosystem covering content operations, monetization, playback, and multi-platform player delivery.

Contributing to backend services for media management, playlist creation and publishing, monetization, and operational workflows, with API/service integration supporting Web and Android playback plus player SDK integration for iOS and tvOS.

PROFESSIONAL EXPERIENCE

Backend ownership across healthcare, SaaS, distributed applications, and enterprise software, with emphasis on modular service architecture, secure APIs, production reliability, integration, and cross-functional delivery.

TulipTech Bangladesh Dhaka, Bangladesh · Dec 2024 - Present
Senior Software Engineer

- Senior backend ownership across enterprise healthcare and SaaS products, covering service architecture, API design, reusable components, secure access control, production reliability, performance, and engineering quality.
- Architected and maintained scalable backend services and production-grade REST APIs for enterprise healthcare and SaaS platforms, translating product requirements into modular service designs that could evolve across multiple products and workflows.
 - Designed reusable backend modules and shared service components, implemented secure authentication and authorization with JWT and RBAC, and strengthened maintainability through clean architecture, consistent engineering patterns, and reusable service boundaries.
 - Improved application performance and reliability through Redis caching, asynchronous job handling, database query optimization, and production troubleshooting; supported AWS/Docker deployments and collaborated closely with Product, Frontend, QA, and DevOps teams.
 - Led code reviews and mentored engineers, contributing to technical design decisions, engineering standards, and delivery quality across the software development lifecycle.

Tech: TypeScript | Node.js | NestJS | PostgreSQL | Redis | Docker | AWS

Amharc Tech Dublin, Ireland · Apr 2023 - Dec 2024
Software Engineer | Remote

- Contributed to a multi-tenant SaaS ecosystem spanning customer management, scheduling, POS, service operations, administration, notifications, and mobile applications.
- Implemented secure identity flows and distributed service communication using JWT, refresh tokens, RBAC, MFA, Kafka, and real-time capabilities across interconnected product services.
 - Worked with an international engineering team to deliver scalable backend features, notifications, workflow modules, and service integrations across interconnected products and mobile experiences.

Tech: NestJS | TypeORM | MySQL | Apache Kafka | Socket.IO | Firebase

BEXIMCO Textiles, Apparels & PPE Dhaka, Bangladesh · Apr 2020 - Mar 2023
Software Engineer | Full Stack

- Developed enterprise applications for manufacturing operations, production monitoring, ERP workflows, business reporting, and operational visibility across multiple business units.
- Built production dashboards and business modules spanning manufacturing, HR, finance, access control, operational reporting, and production visibility.
 - Maintained enterprise systems used across multiple business units with a focus on continuity, reporting accuracy, operational visibility, and dependable day-to-day business workflows.

Tech: React | Node.js | Express | Microsoft SQL Server | IBM DB2

SELECTED ENGINEERING PROJECTS

Selected backend work demonstrating experience across healthcare, multi-tenant SaaS, and digital learning platforms, with recurring focus on secure APIs, modular architecture, distributed workflows, integrations, and production operations.

EMPATHIKA - Enterprise Healthcare Platform
NestJS | Fastify | TypeScript | PostgreSQL | MongoDB | Redis | AWS | Docker
Designed scalable healthcare backend services with secure APIs, reusable modules, caching, and cloud deployment.
Supported patient management, appointments, medical records, operational workflows, authentication, authorization, and scalable service delivery.

Amharc SaaS Ecosystem - Multi-Tenant Enterprise Platform
NestJS | TypeORM | MySQL | Apache Kafka | Socket.IO | Firebase | JWT
Built interconnected services supporting multiple products, distributed workflows, real-time communication, and mobile experiences.
Platform spanning production administration, customer management, POS, scheduling, engineer operations, notifications, and workflow management.

EDUCATION

Bangladesh Army University of Engineering & Technology Natore, Bangladesh · Feb 2015 - Mar 2019
Bachelor of Science (B.Sc.) in Computer Science & Engineering

LANGUAGES

Bengali - Native	English - Professional Working Proficiency
------------------	--