

Emon Reja

Principal Engineer — NestJS / Node.js Backend · Cloud & DevOps · AI/RAG Systems

emondarock@gmail.com | +880 1757-580350 | Dhaka, Bangladesh
linkedin.com/in/emondarock | github.com/emondarock

PROFESSIONAL SUMMARY

Principal Engineer with 9+ years spanning NestJS/Node.js backend architecture and multi-cloud infrastructure. Design modular NestJS monorepos, async queue systems (BullMQ), and event-driven microservices — while owning the AWS/GCP infrastructure, Terraform IaC, and CI/CD pipelines they run on. Deep expertise across the full stack of delivery: TypeScript backend services, container orchestration (Docker, Kubernetes), and production LLM/RAG and agentic AI pipelines (LangChain, LangGraph, Claude & OpenAI APIs). Cut query load times from 50s to under 2s, boosted backend throughput by 70%, reduced deployment time by 60% and data-loss risk by 80%, and shipped 20+ AI agents to production.

WORK EXPERIENCE

Senior Software Engineer · Programming Hero

Dhaka, Bangladesh | Jan 2025 – Present

- Architected NestJS microservices with modular feature modules, custom guards, and interceptors for a real-time blockchain data dashboard, slashing query load times from 50s to under 2s.
- Designed async job-queue architecture with BullMQ to handle data-mutation pipelines, eliminating critical bottlenecks and boosting backend throughput by 70%.
- Refactored legacy service layer into typed NestJS providers with Zod validation, achieving consistent processing under 500ms.
- Managed cloud deployments on AWS and GCP — containerized services, environment configuration, and health monitoring.
- Built a NestJS + LangChain scraper service with an LLM-powered RAG classification pipeline (OpenAI embeddings, pgvector).

Senior Software Engineer (Part-time) · ASON AI INC

Remote, USA | Sep 2024 – Present

- Engineered a model-agnostic NestJS RAG platform supporting hot-swappable LLM and embedding backends via provider abstraction and dependency injection.
- Built a LangChain tool-suite module enabling seamless third-party integrations across multiple LLM providers for business clients.
- Implemented LangGraph agentic workflows within NestJS services, improving multi-step reasoning across 20+ deployed AI agents.

Senior DevOps Engineer · Gain Solutions

Dhaka, Bangladesh | Sep 2021 – Sep 2024

- Designed and maintained AWS infrastructure (EC2, S3, VPC, IAM, RDS, Auto Scaling) for enterprise-grade, multi-region Node.js/NestJS deployments.
- Implemented Infrastructure as Code with Terraform and CloudFormation for repeatable, version-controlled provisioning across dev, staging, and prod.
- Built CI/CD pipelines with Jenkins and GitHub Actions, reducing deployment time by 60% and eliminating manual release steps.
- Containerized microservices with Docker and orchestrated workloads on Kubernetes for high availability and horizontal scalability.
- Configured monitoring with Prometheus, Grafana, and ELK; enforced IAM least-privilege, VPC segmentation, and encrypted S3 — reducing data-loss risk by 80%.

AWS CDK Developer · Omidnetcare

Philadelphia, USA (Remote) | Jul 2022 – Dec 2022

- Authored Infrastructure as Code with AWS CDK (TypeScript) to provision scalable, compliant cloud environments for Node.js/NestJS services.
- Built and maintained Jenkins CI/CD pipelines; implemented Auto Scaling and S3 backup automation.

Backend Developer · Ezcrops

Toronto, Canada (Remote) | Oct 2019 – Oct 2021

- Built GraphQL APIs in Node.js enabling interoperability across services and front-end applications; migrated core services to NestJS architecture on a highly available AWS backend.

Senior Backend Engineer · Console IT

Sylhet, Bangladesh | Apr 2018 – Oct 2021

- Constructed RESTful APIs and maintained backend services; automated deployment pipelines with Bash and Linux administration, cutting deployment time by 50%.

Backend Developer · CRUX

Dhaka, Bangladesh | Jun 2016 – Apr 2019

- Built scalable AWS-backed infrastructure and collaborated with front-end teams for seamless system integration.

KEY PROJECTS

University TA Agent — NestJS + pgvector + BullMQ + Claude API — modular skill-registry / router / executor pattern with RAG-based Q&A, auto-grading, and Zod-validated tool schemas.

Async Video Analysis Pipeline — NestJS worker on AWS ECS Fargate + SQS + Claude Batch API — multimodal RAG with Whisper transcription, Gemini embeddings, and PostgreSQL/pgvector.

Research Agent — NestJS + GPT-4 research platform with MongoDB Atlas, PDF export, query classification, and external search routing.

Hello Doorstep — NestJS / AWS Lambda microservice platform with DynamoDB, Cognito, S3, SES, and SQS — full IaC-driven serverless deployment.

Alti Assistant — Multi-service AI assistant on GCP with Docker — LLMs, vector search, agentic tool integrations, and Cloud Run CI/CD.

Taskco — Multi-tenant SaaS — NestJS API, Next.js frontend, Docker, Kubernetes, Nginx — full CI/CD and containerized deployment.

SKILLS

Primary Stack	NestJS · Node.js · TypeScript · Express.js · Python · PHP (Laravel)
AI / ML	LangChain · LangGraph · Claude API · OpenAI API · RAG · pgvector · Vector Search · Agentic AI · Prompt Engineering
Cloud & IaC	AWS (EC2, S3, Lambda, DynamoDB, VPC, IAM, CDK, CloudFormation, SQS, SES, Cognito, ECS Fargate) · GCP · DigitalOcean · Terraform
CI/CD	GitHub Actions · Jenkins · GitLab CI · Bash & Python Automation
Containers & Infra	Docker · Kubernetes · Nginx · Microservices · Linux Administration
Monitoring	Prometheus · Grafana · ELK Stack · CloudWatch · Log Aggregation
Databases	PostgreSQL · MongoDB · Redis · DynamoDB · MySQL · Advanced SQL & Database Architecture
Architecture & APIs	Event-Driven Systems · Async Queues (BullMQ) · Multi-tenant SaaS · Performance Optimization · REST · GraphQL · WebSockets · gRPC

EDUCATION

Bachelor of Science — Computer Science & Engineering
Metropolitan University, Sylhet, Bangladesh · 2015 – 2019 · GPA 3.8

LANGUAGES

English (Fluent) · Bengali (Native)

Query Load 50s → 2s · Backend Throughput +70% · Deployment Time -60% · Data-Loss Risk -80% · 20+ AI Agents Deployed