

IHEB MNASRI

Backend Software Engineer

Node.js | NestJS | TypeScript | AWS

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PROFESSIONAL SUMMARY

Backend Software Engineer specializing in Node.js, NestJS, TypeScript and Amazon Web Services (AWS), with remote experience for Swiss and Singaporean companies. Develops RESTful APIs, booking and payment systems, customer-insight SaaS and company-management platforms, combining system design, database engineering, automated testing and cloud delivery.

PROFESSIONAL EXPERIENCE

Halphen Serenity SA

Nov 2023 - Present

Node.js & DevOps Developer | Geneva, Switzerland | Remote

Digital solutions provider | Web platforms and custom tools across multiple projects

- **Backend architecture:** Migrated Express.js functionality to a modular NestJS and TypeScript API for service-management workflows, using dependency injection, DTO validation and OpenAPI documentation.
- **Booking consistency:** Developed multi-service, multi-staff and timezone-aware booking workflows, including at-home appointments; applied MongoDB transactions and occupancy checks to reject conflicting reservations.
- **Payment reliability:** Implemented Stripe payments, deposits, manual capture and refunds with webhook deduplication, immutable pricing snapshots and idempotent refund requests for safe retries.
- **Event-driven delivery:** Added a transactional outbox with independently retryable notifications, email and Google Calendar updates, preserving reservation state when downstream delivery fails.
- **Real-time and analytics:** Developed Socket.IO chat, typing indicators and read receipts, plus MongoDB aggregation-based sales reporting with Redis caching and invalidation.
- **Security:** Implemented JWT authentication, role-based access control, rate limiting and request sanitization across customer, professional and administrator workflows.
- **Cloud and CI/CD:** Built GitLab pipelines for paired API/frontend releases to AWS Lightsail with readiness checks, controlled promotion and rollback; integrated S3 storage and signed URLs.
- **Automated testing:** Wrote Jest and Supertest tests for booking conflicts, delayed payment events, refunds and outbox retries; added Playwright checks for customer and professional workflows.
- **AI integration:** Integrated FastAPI content moderation and optional local AI description generation with Docker, health checks, bounded timeouts and Redis-backed request controls.

FANVOICE

Mar 2023 - Sep 2023

Full-Stack Web Developer | Monastir, Tunisia

Enterprise SaaS platform for customer feedback, research and co-creation

- **Backend development:** Developed survey-management workflows with Java Spring Boot, Node.js and MongoDB to collect and aggregate participant feedback for enterprise research campaigns.
- **Survey interfaces:** Redesigned interfaces for anonymous, multi-question, conditional-logic and composite surveys, enabling research teams to configure different questionnaire structures.
- **Reporting and insights:** Integrated response and engagement dashboards with filtering and data exports, helping research teams review campaign participation and analyze survey results.
- **Performance and maintenance:** Refactored legacy application code and optimized MongoDB queries and indexes to improve data retrieval for large survey datasets.

PROFESSIONAL EXPERIENCE CONTINUED

kimbocorp

Feb 2022 - Jan 2023

Backend Developer | Singapore | Remote

Company-formation and management platform connecting entrepreneurs and advisors

- **Backend foundations:** Built Node.js, Express.js and MongoDB backend infrastructure from scratch for company-formation services, including JWT authentication and Google OAuth.
- **Company lifecycle APIs:** Developed APIs for corporate entity registration, compliance tracking and stakeholder management, supporting company setup and ongoing administration.
- **Subscription billing:** Integrated Stripe subscriptions, recurring billing and webhooks to manage the subscription lifecycle for business services.
- **Document management:** Designed corporate document workflows with role-based access control and version tracking to manage access and document revisions.
- **Advisor matching:** Developed expert-client matching with recommendation algorithms and communication workflows connecting business owners with professional advisors.

TECHNICAL SKILLS

Backend and languages: Node.js, NestJS, Express.js, TypeScript, JavaScript, Python, FastAPI, Java, Spring Boot, RESTful APIs, Swagger / OpenAPI, third-party APIs

Data and architecture: MongoDB, Mongoose, Redis caching, SQL / MySQL, NoSQL, transactions, indexing, aggregation pipelines, query optimization, system design, modular architecture, microservices, dependency injection, event-driven workflows

Cloud and DevOps: AWS (EC2, S3, Lambda, CloudFront, Lightsail), Docker, Docker Compose, Kubernetes, Linux, systemd, GitLab CI/CD, monitoring, structured logging, deployment and rollback

Payments and security: Stripe Payment Intents, subscriptions, webhooks, refunds, idempotency, JWT, OAuth 2.0, role-based access control (RBAC), rate limiting, input validation, request sanitization, Google Calendar

Testing and collaboration: Jest, Supertest, Playwright, unit testing, integration testing, end-to-end (E2E) testing, Git, Agile / Scrum

Additional development: React, Angular, Astro, HTML5, CSS3, Socket.IO, WebSockets, Python microservices, Detoxify / PyTorch, ONNX Runtime, local LLM integration

EDUCATION

National Diploma in Computer Engineering | 2018 - 2021

École Supérieure Privée d'Ingénierie et de Technologies (ESPRIT)

Applied Licence - Information Systems Development | 2015 - 2018

Higher Institute of Technological Studies of Kasserine (ISET Kasserine)

CERTIFICATIONS

Server-side Development with NodeJS, Express and MongoDB

The Hong Kong University of Science and Technology | Credential ID: Z234SZV5QQ9H

Managing Big Data with MySQL

Duke University | Credential ID: JZ9UTX7EYC3Z

Front-End JavaScript Frameworks: Angular

The Hong Kong University of Science and Technology | Credential ID: 6G6PQKXABY5R

LANGUAGES

English: full professional proficiency | French: professional working proficiency | Arabic: native