Islem Benarab | Senior Backend Engineer

Cheraga, Algiers – Algeria
+213 672 615 915 • islem.bnarab@gmail.com
islembenarab.qmuniverse.com • islem-benarab-592032233 • islembenarab

Profile

Senior backend engineer specializing in the Java Spring Framework and AI-driven solutions. Strong background in designing scalable, secure and resilient distributed applications: microservices, Docker, Kubernetes, as well as React and Next.js front-ends. Analytical problem solver with a constant focus on delivering high-quality software.

Technical Skills

Languages: Java, Go, JavaScript (ES6+), TypeScript, SQL

Frameworks: Spring Boot, Spring MVC, Spring Security, Spring AI, Hibernate, Deep Java Library (DJL)

Front-End: HTML5, CSS3, React.js, Next.js, Angular, TypeScript

DevOps & Cloud: Docker, Kubernetes, Nginx, Linux/systemd, Prometheus, Grafana, Git/GitHub

Microservices: Spring Cloud (Eureka Server, Spring Cloud Gateway), Apache Kafka, RabbitMQ

IoT & Telecom: Serial device integration, USSD session flows, SMS gateways, GraalVM native images

Security & Identity: Keycloak, OAuth2 / OIDC, JWT, mTLS, Spring Security

Databases: PostgreSQL, MongoDB, Firebase, MySQL, Redis, Elasticsearch

Other: Design Patterns (Factory, Builder, DTO, Singleton), Clean Code principles, solution design, analytical thinking, effective communication & collaboration

Professional Experience

Yassir — **Algiers**
Software Engineer — *Nov 2025 – Present*
- Contributed to the design and development of scalable fintech solutions within a microservices architecture
- Optimized backend performance for high-concurrency transaction handling using Java and Spring Boot
- Collaborated with cross-functional teams to integrate secure payment gateways and third-party APIs
- Implemented robust unit and integration tests ensuring system reliability and data integrity

AiUnivers — **Algiers, Cheraga**
Software Engineer — *Sept 2024 – Oct 2025*
- Designed large-scale solutions for enterprise clients with complex structures
- Implemented AI solutions with the Java Spring Framework and Spring AI
- Integrated Deep Java Library (DJL) into Spring for AI-based features

Digital Home — **Algeria**
Software Engineer — *Jul 2023 – Sept 2024*
- Designed and implemented scalable microservices using Java Spring Boot
- Developed secure RESTful APIs using JWT and OAuth2
- Led problem-solving sessions on complex technical challenges and containerized services with Docker, improving deployment efficiency
- Developed interfaces with Next.js, integrated with the Spring server API using Axios

Education

Master's Degree in Networks and Distributed Systems — **Constantine, Algeria**
2021 – 2023

Bachelor's Degree in Software Engineering — **Constantine, Algeria**
2018 – 2021

Projects

Yassir Cash — **Fintech**
Software Engineer — *Nov 2025 – Present*

- Developed core backend features for the Yassir Cash digital wallet ecosystem, enabling secure P2P transfers and payments
- Engineered secure API endpoints compliant with financial regulations and security standards
- Integrated real-time notification services and transaction history tracking using scalable database queries
- **Stack:** Java, Spring Boot, Microservices, PostgreSQL, Docker

National Adhahi Platform — **adhahi.dz**
Lead Backend Engineer (Auto-Entrepreneur) — *Apr 2026 – Jun 2026*

- Designed and implemented the backend architecture and data model for Algeria's national Eid Al-Adha sheep reservation platform
- Built a high-throughput registration system on an asynchronous event-driven architecture with RabbitMQ, PostgreSQL, Redis and Java 21
- Engineered a scalable registration workflow processing more than **160,000 registrations within the first 30 minutes of launch**
- Designed a PostgreSQL primary-replica architecture (one write node, two read replicas) to absorb large-scale registration and consultation workloads
- Implemented distributed caching and high-performance data access strategies with Redis
- Architected asynchronous registration processing and workload distribution through RabbitMQ consumers to absorb peak traffic bursts
- Collaborated with government stakeholders and operational teams to ensure platform reliability during national campaigns
- **Stack:** Java 21, Spring Boot, PostgreSQL, Redis, RabbitMQ, Docker, REST APIs, distributed systems

Qmuniverse — digital goods platform — **gsm.qmuniverse.com**
Founder & Lead Engineer — *2025 – Present*

- Designed, built and operate a self-hosted platform for digital goods retail — mobile credit top-ups and internet cards — covering the customer storefront, the ordering pipeline and back-office settlement
- Engineered a high-performance IoT gateway service driving multi-port GSM telecom hardware over serial links, with a USSD session state machine, a multi-modem registry and SMS short-code handling
- Compiled the gateway to a GraalVM native image for near-instant startup and a low memory footprint on constrained hardware
- Delivered the `gsmadmin` operations console (Next.js) behind a Spring Security BFF, with Keycloak multi-realm SSO, identity brokering and role-based access control
- Instrumented the platform end to end with Prometheus and Grafana dashboards and alerting across application, gateway and identity metrics
- Operate the production estate: PostgreSQL and Redis, S3-compatible object storage, Nginx, native systemd services, WireGuard networking and scheduled two-tier backups
- **Stack:** Java 21, Spring Boot, Micronaut, GraalVM, Keycloak, Next.js, PostgreSQL, Redis, Nginx, Prometheus, Grafana, Linux/systemd

SSA Mobilis Project — **Telecom**
Software Engineer — *Mar 2025 – Present*

- Led the project design and database schema architecture for the SIM inventory management system of Algeria's leading telecom operator
- Built a large-scale solution to manage SIM inventory and allocation during sales operations, supporting millions of batch insert/update/delete operations
- Developed with Next.js (TypeScript) and Spring Boot, using PostgreSQL and Redis for optimal performance
- Deployed with Docker and Kubernetes for scalable containerized infrastructure
- Implemented Elasticsearch for efficient log searching and monitoring best practices
- Created complex backend queries and a statistics dashboard providing comprehensive operational insights
- Ensured robust security and performance with JWT authentication and Spring Security best practices

AiUnivers Epayment Microservice **Online payments**

Software Engineer *Aug 2025 – Oct 2025*

- Developed a secure Spring Boot microservice to process online payments through the SATIM Algerian payment gateway
- Engineered a multi-tenant REST API with API key authentication for client applications to initiate and verify payments
- Implemented the complete payment lifecycle, including status verification with the SATIM gateway and asynchronous callbacks to client systems
- Created a user-facing web interface with Thymeleaf for payment forms and transaction results
- Built a PDF generation service (iText, OpenPDF) to create and email bilingual (Arabic/English) transaction receipts
- Secured the application with Spring Security, custom filters and robust URL validation to prevent common vulnerabilities
- Supports both CIB and Edahabia card transactions
- **Stack:** Java, Spring Boot, Spring Security, Spring Data JPA, PostgreSQL, Maven, Docker, Thymeleaf

RFID SaaS Platform **IoT**

Software Engineer *Dec 2024 – Present*

- Designed an IoT-based RFID tracking platform with Angular, Spring Boot and RFID reader integration
- Delivered end-to-end development including front-end, back-end and real-time device communication

Digital Home Plus **plus.digital-home.org**

Software Engineer *Oct 2023 – Apr 2024*

- Developed a distributed services platform using React and Spring Boot for the Algerian market

Digital Home Admin **Enterprise management**

Software Engineer *Jul 2023 – Feb 2024*

- Created a centralized platform for managing sales, consumption, stock and operational states across the enterprise
- Built with Next.js (front-end), Spring Boot (back-end), PostgreSQL and Spring Caching for optimized data access

Languages

English: Fluent Arabic: Native French: Basic