

Mohamed Hamed MOHAMED AHMED

Software Engineer

✉ mdhamed.off@gmail.com · ☎ +33 7 59 59 60 37 · Lyon, France

🌐 mdhamed.dev · github.com/mdhamed238 · linkedin.com/in/mdhamed238

Profile

Software Engineer at LCL building internal banking platforms serving thousands of agency advisors. Java/Spring Boot backend focus with hands-on experience migrating legacy systems to cloud infrastructure. Open-source contributor to PMD and WeasyPrint. Master's student at Université Claude Bernard Lyon 1.

Education

Master's Degree in Computer Science (M1) **Sep 2024 – Present**
Université Claude Bernard Lyon 1, France — Software Engineering, Distributed Algorithms, Big Data

Licence Informatique (Bachelor's Degree) **Jan 2021 – Jul 2023**
ISCAE / Université de Nouakchott, Mauritania — Algorithms, Data Structures, Web Development, Databases

Professional Experience

Software Engineer (Apprenticeship) **Sep 2025 – Present**
LCL, Villejuif, France — Major French retail bank, subsidiary of Crédit Agricole Group

- Maintaining and extending client onboarding and sales portal features used daily by several thousand agency advisors across LCL's retail banking network.
- Developing new features and fixing bugs in microservices for customer account creation and subscription workflows.
- Refactored the document management layer from local filesystem I/O to Amazon S3, a critical step in making the application stateless for the migration to Kubernetes architecture.
- Designing and automating end-to-end test suites integrated into CI/CD pipelines.

Tech Stack: *Java, Spring Boot, Angular, Amazon S3, Selenium, Cypress*

Full-Stack Developer **Mar 2024 – Jun 2024**
Software Savants, Nouakchott, Mauritania — Software agency specializing in healthcare and startup solutions

- Integrated Saudi Arabia's NPHIES (National Health Information Exchange) API into healthcare backend, ensuring compliance with national interoperability standards.
- Developed API connections for real-time patient eligibility verification and automated insurance claim workflows.
- Worked with healthcare data standards including HL7 FHIR for cross-system interoperability.
- Configured CI/CD pipelines for automated testing and deployment.

Tech Stack: *Python, Frappe Framework, MariaDB, HL7 FHIR, GitLab CI/CD*

Frontend Developer **Dec 2023 – Feb 2024**
GSM, Nouakchott, Mauritania — IT consulting and technology solutions provider

- Modernized the National PBF (Performance-Based Financing) Portal for the Ministry of Health.
- Built automated reporting systems aggregating data from healthcare facilities across the national territory.
- Developed interactive public dashboard for health metrics visualization with code splitting and lazy loading optimizations.

Tech Stack: *Next.js, React, TailwindCSS, Data Visualization*

Full-Stack Developer **Feb 2023 – Dec 2023**
Ibtikar Technologies, Nouakchott, Mauritania — IT company building GovTech and digital identity solutions

- Started as intern; promoted to full-time after 5 months based on performance.
- Developed mobile app for traffic officers to digitally record road violations.
- Integrated secure payment gateway for real-time fine settlements.
- Built administrative dashboard centralizing infraction data for operational reporting and resource allocation.

Tech Stack: *React Native, Node.js, Next.js, MongoDB Atlas, Firebase*

Open Source Contributions

- **PMD** (Static Code Analysis): 2 merged PRs fixing Java parser bugs including switch expressions in `super()` calls and pattern variables in for-each loops.
github.com/pmd/pmd
- **Talawa API** (Palisadoes Foundation): 3 merged PRs achieving 100% code coverage on mutation resolvers (unit and integration tests).
github.com/PalisadoesFoundation/talawa-api
- **WeasyPrint** (PDF Rendering): Contributing to the Python HTML/CSS to PDF engine; connected with maintainers.
github.com/Kozea/WeasyPrint

Projects

Cloud Image Processing API

[GitHub]

FastAPI, Python, PostgreSQL, Redis, Docker, Cloudflare R2, JWT

- Built REST API for image transformations (resize, crop, rotate, format conversion, filters) with async processing.
- Implemented Redis caching layer to avoid redundant processing of identical transformation requests.
- Integrated Cloudflare R2 for cloud storage with JWT authentication and role-based access control.
- Containerized with Docker and deployed to DigitalOcean App Platform with GitHub Actions CI/CD.

Weather API

[GitHub]

Java, Spring Boot, Redis, Docker, Spring WebFlux, Bucket4j, OpenAPI

- Developed reactive Spring Boot application consuming Visual Crossing weather API with Redis caching.
- Implemented rate limiting with Bucket4j and API key authentication for secure access control.
- Built web interface for testing with comprehensive OpenAPI/Swagger documentation.

Leadership & Community

Core Team Member

Oct 2021 – Jul 2023

Google Developer Student Clubs, Nouakchott

- Organized technical workshops and developer conferences at the University of Nouakchott.
- Grew local developer community through consistent engagement, event planning, and social media outreach.

Technical Skills

| | |
|----------------------------|---------------------------------------------------------------------------------------------|
| Languages: | Java, Python, TypeScript, JavaScript, SQL |
| Backend: | Spring Boot, Spring WebFlux, FastAPI, Node.js, Express.js, Frappe, REST APIs, Microservices |
| Frontend: | Angular, React, Next.js, React Native, TailwindCSS, Redux |
| Databases: | PostgreSQL, MySQL, MongoDB, MariaDB, Redis |
| Cloud & DevOps: | Amazon S3, Cloudflare R2, Docker, Git, GitLab CI/CD, GitHub Actions, Linux |
| Testing: | Selenium, Cypress, JUnit, Jest |

Languages

English: Fluent · **French:** Professional Working Proficiency · **Arabic:** Native