Nadia FERCHICHI

8 years of experience

Backend JAVA Engineer

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LCL
1 year & 6 months
Backend Java Engineer

ENGIE Lab Crigen
2 years & 9 months
Backend Java Engineer

TOTAL
1 year
Backend Java Engineer

EDF
1 year & 3 months
Backend Java Engineer

SMOOVE-VELIB'
1 year & 2 months
Backend Java Engineer

MOTIVATION

Experienced backend Java engineer with over 8 years of expertise in software development, specializing in designing and implementing RESTful APIs, object-oriented programming, and clean architecture. I have strong interest in mobile development, especially in immersive technologies like augmented and virtual reality. My solid experience in modular architectures (clean/hexagonal), API design, software engineering best practices (SOLID, design patterns, TDD), and tools like Docker, Kubernetes, Swagger/OpenAPI, and UML gives me a strong foundation to contribute effectively to innovate and cutting-edge mobile projects.

EDUCATION

2016 : Master 2 in Data Science (Natural Language Processing) – Université de Lorraine, Nancy, France

2015 : National Engineering Degree in Computer Science – ENSI

2012 : Preparatory Cyclme for Engineering Schools specializing in **Mathematics and Physics**

LANGUAGES

English : Advanced
French : Fluent
Arabic : Native

TECHNICAL SKILLS

JAVA **Python** **SQL** **Hexagonal architecture**
REST APIs **Maven** **Swagger/OpenAPI**
Argo-CD **Unit tests** **Kubernetes/Rancher**

Programming: Java, Python, C#, Shell
Database : SQL, PostgreSQL, Oracle, Flyway
Design : Design patterns; SOLID principales, UML
Architectures: Clean Architecture, Hexagonal Architecture, Microservice Architecture
APIs : REST, Swagger/OpenAPI, Webservices (JAX-RS)
Devops: Kubernetes, Docker, Rancher, Argo-CD, Gitlab
Security: OKTA, OAuth 2.0
Monitoring tools : Grafana, Prometheus
Methodologies: Agile SCRUM, Safe Agile

COMPÉTENCES

- Analyse client needs and define appropriate technical solutions
- Refine and estimate user stories (Agile methodology)
- Define API contracts (OpenAPI) and ensure quality through code reviews, documentation, and performance checks
- Participate in technical decision-making and architectural discussions.
- Ensure scalability and maintanability through modular architectures (hexagonal architecture)

LCL – October 2023 to Present

Senior Backend JAVA Engineer

Redesign from scratch of online sales of savings products

PROJECT CONTEXT

I'm fully responsable for the technical side of a strategic project: redesigning the online sales platform for various savings products. I'm working independently, handling the project end-to-end from analyzinng client needs to deploying the solution..

CHALLENGE & RESULTS

As the only Java Engineer Developer, i'm responsible for the entire back-end delivery. I'm navigating the entire lifecycle of the project: requirement analysis, design, development, deployment, and production support.

STACK

Java 17 **REST** **OpenAPI** **Design Patterns** **SOLID Principles**
Hexagonal Architecture **Gitlab-ci** **Kubernetes** **Docker**
ArgoCD **Vault** **SonarQube** **Junit** **JIRA**
Postman **Intellij**

MY CONTRIBUTION

- Analyze client requirements and identify appropriate technical solutions.
- Communicate directly with business teams to gather and clarify requirements.
- Translate functional needs into clear and actionable user stories
- Estimate development tasks and prioritize the backlog.
- Participate in key technical decisions throughout the project
- Define the Interface Contract of the API
- Design the API based in Hexagonal Architecture principles
- Illustrate the system using sequence diagrams for better technical communication
- Implement the API
- Implement Unit Tests
- Contribute to the CI/CD pipeline setup using Kubernetes, Gitlab-ci and ArgoCD
- Provide ongoing technical support during development
- Play an active rôle in the production release of the project

ENGIE Lab Crigen – January 2021 to September 2023

2 years et 7 months

Backend JAVA Engineer

Industrialization of Solutions proposed by researchers via REST APIs

PROJECT CONTEXT

Our « Engineering Team » had the mission to prove that the technical solutions proposed by researchers could be industrialized by exposing them through REST APIs. The researchers provided practical examples of these solutions to the engineering team, which was responsible for designing and implementing the necessary services to use them efficiently.

CHALLENGE & RESULTS

The researchers, who were also data scientists, acted as product owners in the Scrum methodology used by the team. The biggest challenge was to help Pos express their needs clearly, which required drafting functional specifications and creating validation tests.

STACK

Java 11/17 | REST | OpenAPI | Spring boot | Quarkus | Architecture hexagonale | PostgreSQL | Flyway | Gitlab | Python | Kubernetes | Rancher | OKTA | JIRA | SonarQube | Junit | PITest | Jupyter Notebook | Postman | Intellij

MY CONTRIBUTION

- Analyze client requirements and identify appropriate technical solutions.
- Refine and estimate user stories (Agile methodology)
- Define interface contracts (Swagger/OpenAPI)
- Design sequence diagrams highloghing actor interactions and system logic in chronological order.
- Define state machines.
- Participate in technical decision-making.
- Implement REST APIs following hexagonal architecture.
- Write unit tests.
- Perform code reviews.
- Deploy projects on Kubernetes clusters.
- Create a PoC for secured API with OKTA.
- Ensure technical support, corrective and adaptative maintenance of developed services.
- Analyze and fix bugs.

TOTAL – October 2019 to November 2020 1 Year

Backend JAVA Engineer

Migration of Total's Sismage platform to Google Cloud Platform

PROJECT CONTEXT

Wanting to benefit from the elasticity of the Cloud, Total decided to migrate its heavy Sismage client platform (requiring very high memory and GPU resources) to GCP to offer it in SaaS mode. As a result, we contributed to the development of portal enabling the deployment of preconfigured virtual machines, with easy access, with the Sismage desktop application installed for Total users.

STACK

Agile **Java 8** **Maven** **REST**
Spring Boot **Spring Data JPA** **Junit**
MySQL **Flyway** **GCP** **Git bash** **Bitbucket**
SonarQube **Intellij**

MY CONTRIBUTION

- Participated in Google Cloud Fundamentals training.
- Managed projects in GCP (Google Cloud Platform).
- Cloud Billing: used GCP API's to retrieve and export billing data to BigQuery.
- Used Google Cloud Platform services (Compute Engine, Filestore..).
- Implemented REST APIs.
- Wrote unit tests.
- Analyzed code quality using SonarQube.
- Provided technical support, corrective and adaptative maintenance for developed services.

EDF- June 2018 to September 2019

1 Year et 3 months

Backend JAVA Engineer

Energy Production Supervision Information System

PROJECT CONTEXT

Implementation of updates to the energy production supervision information system.

CHALLENGE & RESULTS

Follow the Struts architecture and use SVN for version management.

MY CONTRIBUTION

- Develop backend services:
  - Receive production programs
  - Transmit and print production data
- Publish performance capabilities of production sites (Frontend with ChartJS)
- Manage versioning with SVN.

STACK

Agile JAVA/JEE SQL SVN

JSP SOAP chartjs Oracle

Sonarlint Struts Ant Jboss JIRA

SMOOVE-VELIB' – April 2017 to May 2018

1 Year

Backend JAVA Engineer

Vélib' Billing Management Information System

PROJECT CONTEXT

Implementation of a billing management information system for Velib' (bike-sharing service).

CHALLENGE & RESULTS

Gain dual expertises in web develoment, specifically in REST API, and agile methodology to successfully deliver the project.

STACK

Agile JAVA/JEE Maven Spring boot EJB PostgreSQL Junit Hibernate Gitlab Mockito Wildfly Postman Sonarlint Git Extension Eclipse

MY CONTRIBUTION

- Refine and estimate user stories (Agile methodology)
- Participate in defining web service interface contracts
- Develop RESTful Web Services and batch jobs to manage customer profiles, susbricptions, trips, and invoices
- Implement unit tests using Junit
- Automate acceptance test scenarios
- Analyze code quality using the SonarLint plugin
- Investigate and resolve bugs