

# Louai ALOUI

SOFTWARE ENGINEER

Ariana essoughra, 2081, Ariana, Tunis

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“Be the change that you want to see in the world.”

## Skills

**Programming Languages:** JavaScript, TypeScript, Python

**Frameworks:** Express, Nest.js, Strapi, Gatsby, Next.js, Flask, React-Redux

**Data Management:** PostgreSQL, MySQL, QuestDB, SQLite3, MariaDB, MongoDB, DynamoDB, SQLAlchemy, Prisma, TypeORM, Sequelize

**Cloud & DevOps:** AWS (EC2, S3, SES), Wasabi, Docker, Docker Swarm, Kubernetes, CI/CD Pipelines, bash

**Libraries & Tools:** React, Redux, jQuery, Bootstrap

**Languages:** English (B2 Level), French (B2 Level), Arabic (Native)

## Work Experience

### Quantech Solution Partners.

Nice (Remote)

#### FULL-STACK ENGINEER

Jan. 2024 - Dec. 2024

- Transitioned from frontend to full-stack engineering, leveraging Python scripting to automate and optimize workflows for financial data (DataScope, OPRA), significantly enhancing operational efficiency.
- Led the migration from QuestDB to PostgreSQL, guaranteed faster query performance while ensuring robust data integrity and scalability.
- Spearheaded the transition from REST APIs to GraphQL, enabling more flexible and efficient data queries, reducing response times.
- Configured AWS EC2 instances to seamlessly integrate Next.js, Python, and GitHub Actions, optimizing CI/CD pipelines for rapid deployment across multi-environment architectures.
- Integrated Confluence with Microsoft Teams, streamlining collaboration and knowledge sharing across distributed teams.
- Implemented push-to-talk functionality using Zello, enhancing real-time communication for globally dispersed team members.
- Deployed and configured a Mattermost Docker image, significantly improving task management and fostering enhanced team coordination.

#### FRONTEND ENGINEER

- Designed and implemented advanced interactive widgets and data visualizations, significantly enhancing user engagement and experience for dynamic web applications.
- Developed a modular and scalable frontend architecture using Next.js 14 (App router) and Redux Toolkit, centralizing state management to ensure maintainability and optimal performance.
- Integrated NextAuth for secure and seamless authentication, improving user onboarding and session management while adhering to modern security standards.
- Built customizable user interface widgets, empowering users to dynamically resize and position widgets within a grid system for a highly personalized dashboard experience.
- Authored custom React hooks to abstract complex logic, improving component performance, reusability, and overall code quality.
- Collaborated with cross-functional teams to align frontend development with backend APIs, delivering cohesive and high-quality user experiences.

### Digital Rogue Wave

Montplaisir, Tunis

#### BACKEND ENGINEER

Dec. 2022 - Sep. 2023

- Played a pivotal role in developing a cutting-edge SaaS application for managing referral system events, utilizing a robust microservices architecture powered by NestJS and Apache Kafka for seamless event-driven communication.
- Joined the project mid-development and immediately contributed by designing and implementing core microservices for email notifications, reward redemptions, and referral tracking, adhering to Domain-Driven Design (DDD) principles for scalable and maintainable systems.
- Spearheaded the Dockerization of key services, including PostgreSQL (and later, a seamless migration to CockroachDB), Redis for high-performance caching, and Prometheus, Loki, and Grafana for comprehensive monitoring and observability.
- Implemented and optimized an open-source Zookeeper cluster to ensure reliable coordination and management of Apache Kafka servers, enhancing system stability and event processing efficiency.
- Collaborated with the frontend team, delivering critical Next.js 13 (Page Router) tasks, ensuring smooth integration between backend APIs and the user interface.
- Architected and managed CI/CD pipelines, automating the build, test, and deployment processes, leading to faster and more reliable releases on AWS EC2 instances.
- Demonstrated a proactive approach to quality assurance by implementing rigorous unit testing with Jest and integration testing with Cypress, achieving high code reliability and meeting stringent quality standards.
- Enhanced application performance and debugging capabilities by setting up real-time monitoring solutions with Prometheus, Loki, and Grafana, significantly reducing mean time to resolution (MTTR) for production issues.
- Worked closely with cross-functional teams to ensure seamless delivery of features, from ideation to deployment, while continually improving system performance and scalability.

## Wagmi Tech UG

Berlin (Remote)

SOFTWARE ENGINEER (FREELANCE)

Apr. 2022 - Oct. 2022

- Worked with a VC-backed startup operating in stealth mode, contributing to the development of an NFT marketplace built on Distributed Ledger Technology (Hedera Hashgraph).
- Implemented Apollo Server and client, optimizing data fetching to ensure smooth interaction with backend servers and improve performance.
- Gained hands-on experience with smart contracts and Web3.0 technologies, contributing to the growing blockchain ecosystem.
- Integrated Algolia for advanced search functionalities, enhancing speed and complexity in data retrieval for the marketplace.
- Led the migration from serverless MongoDB to a MongoDB cluster, enabling the use of database listeners and enhancing database performance and scalability.
- Utilized technologies such as Express, MongoDB, Gatsby, TailwindCSS, Docker, Kubernetes, Prisma, GraphQL, and TypeGraphQL to build a scalable and efficient system.
- Despite significant efforts, SADLY the project did not achieve its mission goals.

## Bulldozer

Quebec (Remote)

SOFTWARE ENGINEER GRADUATION INTERNSHIP

Jul. 2021 - Jan. 2022

- Led backend development, implementing headless CMS technology to streamline development time and enhance scalability.
- Built and maintained fully automated CI/CD pipelines on CircleCI for containerized applications using Docker and AWS, improving deployment efficiency.
- Designed and developed the Next.js frontend, delivering a responsive and dynamic user interface.
- Implemented several APIs using Strapi, Node.js, Koa, and AWS Lambda serverless functions to enhance application functionality and scalability.
- Worked with databases such as SQLite3 for testing and MariaDB for production, utilizing Bookshelf.js and Knex for ORM and query building.

## Education

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### ESPRIT - Honoris-United-Universities

Ghazela, Ariana, Tunis

ENGINEERING DEGREE IN COMPUTER SCIENCE AND SOFTWARE ENGINEERING

Sep 2016 - Jan. 2022

- Participated in the university's website updates twice, contributing to the site's maintenance and enhancement.