



## Elmoutouakil Khadija

### Software Engineer

## Contact

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## Skills

- ▶ C, C++
- ▶ Python, JavaScript
- ▶ Django, PostgreSQL
- ▶ Django REST Framework
- ▶ React.js
- ▶ HTML/CSS, Bootstrap
- ▶ SQL, MariaDB
- ▶ Quick Learning Ability
- ▶ Analytical Thinking
- ▶ Problem-Solving
- ▶ Teamwork & Adaptability
- ▶ Linux & Desktop Work
- ▶ Mathematics

## Biography

A software engineer specializing in full-stack web application development and skilled in both frontend and backend technologies. Aimed at ensuring smooth user experiences with strong server-side solutions. To me, solving problems and being innovative really drive me to devise next-gen digital solutions that uplift the quality of life.

## Projects

### Ft Transcendence

#### Web Development

Django | PostgreSQL | Vanilla JavaScript | HTML, CSS  
| Docker, Git

I implemented the back-end infrastructure in such a way that it facilitated quick response endpoint actions needed for data retrieval and management, thereby ensuring a smooth request-response handling. I initiated introducing Two-Factor Authentication (2FA) to enhance security on the accounts against user breach attempts. The user interface interactive pages were built in the front-end using HTML, CSS, and Vanilla JavaScript to create a responsive single-page application. Subsequently, orchestration services with automated workflows were set up using Docker and GitHub Actions for CI/CD, which helped to streamline development, testing, and deployment.

### WebServer

#### Http webserver

Technologies: C++98 | Socket Programming

I built a custom HTTP web server in C++98 with an emphasis on implementing the core HTTP protocols GET, POST, and DELETE over static and dynamic content through CGI. This work involved server optimization for scalability and efficiency so that the server would be able to handle multiple concurrent client connections. Select() was used to manage client connections so that the server could operate smoothly with maximum responsiveness under heavy load.

### Inception

#### Infrastructure/DevOps

Technologies: Docker, Docker Compose, NGINX, WordPress, MariaDB

I established and effectively administered a steady infrastructure via Docker Compose by interfacing NGINX, WordPress, and MariaDB containers for smooth inter-service communication. Utilizing good Docker management, I improved performance and automated operations among the containers, furthering system efficiency and reliability. My engagement has involved setting up, maintaining, and troubleshooting containerized environments for well-orchestrated and scalable deployment.

### Minishell

#### Software Development

Technologies: C Programming language

I utilized my problem-solving abilities to design a personalized command-line shell interface called "minishell" to handle some very sophisticated command execution and system interaction challenges. The shell operated smoothly, reproducing Unix shell behavior with due consideration to quotes, redirection, pipes, and environment variables. Debugging complex issues, optimizing systems, and constructing powerful parsing mechanisms that demanded analytical and adaptable thinking enabled me to build a sturdy yet user-friendly shell experience.

## Language

- ▶ Arabic
- ▶ French
- ▶ English

## Interests

- ▶ Basketball
- ▶ Swimming
- ▶ Reading
- ▶ Cooking
- ▶ Travel

## Education

### Software Engineer Student

UM6P-1337 Coding School Ben Guerir

10/2022 - current

Pursuing a rigorous software engineering curriculum with a focus on problem-solving, algorithmic thinking, and full-stack development. Engaged in hands-on projects covering system programming, web development, and security.

### Bachelor's degree in mathematics applications

FSSM Faculty of Science Smlalia Marrakech

09/2016 - 06/2022

Specialized in Algebra, developing strong mathematical foundations essential for problem-solving, logic, and computational thinking. Studied advanced topics in linear algebra, abstract algebra, and mathematical modeling.

### Baccalaureat in Mathematics Sciences

qualifying high school Tassout Elkelaa des Sraghnas

09/2015 - 06/2016

Completed Mathematics Sciences A option, focusing on advanced calculus, probability, and algebra, which provided a strong analytical and logical problem-solving foundation.

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