Elmoutouakil Khadija

Software Engineer

Contact

Lot 660, Hay Moulay Rachid
Ben Guerir, Morocco

+212 643617436

elmoutouakil.khadija@gmail.com

linkedin.com/in/elmout/

github.com/Kelmoutouakil

Skills

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

Summary

A Full-Stack Software Engineer with expertise in backend and frontend development, specializing in designing scalable web applications and RESTful APIs. Experienced in data-driven applications, system optimization, and automation. I am passionate about problem-solving and innovative solutions that enhance efficiency and user experience. Currently seeking an internship at Green Energy Park, where I can leverage my skills in web development, API integration, and data visualization to contribute to projects in energy modeling and simulation.

Work Experience

Ft Transcendence   `Web Development`

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

Built and deployed a secure backend setup for a real-time web application with robust data processing and system security. Built REST APIs to enhance data retrieval and ease request processing, enhancing system efficiency. Added Two-Factor Authentication (2FA) to provide an additional layer of security to user accounts. Also, implemented CI/CD pipelines with Docker and GitHub Actions for automated deployment and testing, ensuring an easy development process. On the client-side, developed a responsive and interactive user interface with React.js, HTML, and CSS to improve user experience. Incorporated dynamic components and state management for seamless client-side interactions..

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.

Interests

- Basketball
- Swimming
- Reading
- Cooking
- Travel

Education

Software Engineer Student
10/2022 - current

UM6P-1337 Coding School Ben Guerir

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
09/2016 - 06/2022

FSSM Faculty of Science Smlalia Marrakech

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
09/2015 - 06/2016

qualifying high school Tassout Elkelaa des Sraghnas

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

Why Green Energy Park?

Green Energy Park is a cutting-edge research center specializing in green energy, with the opportunity to work on innovative projects with real-world applications. Its work in energy efficiency, simulation, and data analytics is particularly attractive to me, as they are closely linked to my technical background and individual interests.

Through this internship, I hope to learn from experienced professionals, contribute to meaningful projects, and gain a better understanding of technology implementation in renewable energy. I am eager to further develop my skills while being a part of the green cause of Green Energy Park in encouraging sustainable solutions.

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