



Mohamed Ajrou

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ABOUT ME

I am a dedicated backend developer with a strong focus on building robust and scalable web applications using Django. My expertise includes Docker, Linux server administration, and implementing security best practices. Passionate about DevOps, I aim to create automated and efficient infrastructure solutions. I thrive on solving challenging problems and continuously learning to advance in system administration, virtualization, and web development.

EDUCATION AND TRAINING

Bachelor's Degree in Physics

FSAC [08/09/2022 – Current]

City: Casablanca | Country: Morocco | Website: <https://fsac.univh2c.ma/front/index.html>

IT Architect

1337 [28/09/2022 – Current]

City: Tetouan | Country: Morocco | Website: <https://1337.ma/>

LANGUAGE SKILLS

Mother tongue(s): Arabic

Other language(s):

English

LISTENING A2 READING A2 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

French

LISTENING B1 READING B1 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

C/C++ / HTML/CSS / Git/ GitHub / Docker / Python / Git / JavaScript / System administration / Linux server setup / virtualization / scripting (Bash) / Linux / Web framework: Django / Django-REST / PostgreSQL / MySQL / React Frame Work / Django / RESTful / Web services and RESTful APIs / Nginx / PM2

PROJECTS

The Ownership Economy Directory

The *Ownership Economy Directory* is designed as a comprehensive directory for organizations within the Ownership Economy, such as cooperatives, DAOs, employee-owned businesses, and other alternative ownership models. The application features a responsive React frontend with search and filtering capabilities, along with a simple JSON Server-based backend for data management.

Link: <https://github.com/ajrou4/ownership-economy-directory.git>

ft_transcendence

Full-Stack Web Application

Developed a web app with secure authentication, interactive chat, and online games (Pong).

Tech Stack: Django, DRF, JavaScript, WebSockets, Redis, PostgreSQL, Nginx, Docker

- JWT & 2FA authentication

- Real-time features via WebSockets (chat, matchmaking)
- Redis caching for performance
- Deployed with Docker & Nginx + SSL (HTTPS)

Links: https://github.com/ajrou4/Tournament_Gbot | <https://github.com/ajrou4/game-js>

Cub3D- Ray-Casting Maze Exploration

This project, inspired by the classic Wolfenstein 3D game, explores ray-casting—a core technique for rendering real-time 3D environments. It offers a practical dive into creating first-person perspectives and graphical representations similar to early FPS games.

Link: <https://github.com/ajrou4/cub3d>

Minishell - Developed a custom shell in C

Developed a custom shell in C, emulating basic functionality of a Unix shell. The project involved creating a command-line interface with a prompt, command history

Link: <https://github.com/ajrou4/Minishell>

Inception — Docker Infrastructure Project

Developed and deployed a virtualized infrastructure using Docker and Docker Compose, consisting of NGINX with TLS, WordPress with PHP-FPM, and MariaDB services. Configured Docker containers from scratch, including writing Dockerfiles, setting up Docker volumes for persistent data, and establishing secure networking between services. Ensured best practices for security by using environment variables and Docker secrets. The project was completed on a virtual machine, adhering to strict performance and security guidelines

Link: <https://github.com/ajrou4/inception>

ft_IRC - IRC Server Development in C++98

Designed and implemented an IRC server in C++98, capable of handling multiple clients simultaneously using non-blocking I/O operations. Developed core IRC functionalities including user authentication, nickname and username management, channel operations, and private messaging. Implemented operator-specific commands such as KICK, INVITE, TOPIC, and MODE. Ensured robust error handling and system resource efficiency, adhering to best practices for non-blocking server architecture

Link: <https://github.com/ajrou4/IRC-AK-MSN->

Born2beRoot Project

Objective: Set up a secure, virtualized server environment adhering to strict system administration guidelines.

- Configured a virtual server using VirtualBox (or UTM) with **Debian/Rocky Linux**, emphasizing minimal services for security.
- Implemented encrypted partitions with **LVM**, configured **UFW/Firewalld** for firewall rules, and set up secure **SSH** access on a custom port.
- Enforced a robust **password policy** and customized **sudo** configurations for enhanced security and accountability.
- Developed a Bash script for system monitoring, providing real-time data on CPU usage, memory, storage, and network activity.
- Bonus: (if applicable) Integrated a WordPress website or additional custom services to extend the functionality.