

# Abdelhay Bouramdane

SOFTWARE ENGINEER · FULL STACK DEVELOPER

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## Summary

My name is Abdelhay, I am a software engineering student at 1337 UM6P (Université Mohammed VI Polytechnique), which is part of the 42 network. During my studies, My projects has covered a range of areas, including low-level programming, front-end and back-end, DevOps, and even gaming. These projects helped me build strong skills in algorithms, data structures, and software design.

## Education

### 1337 (42 Network) UM6P

Ben Guerir, Morocco

SOFTWARE ENGINEER

Oct. 2022 - Present

- The 1337 system, part of the 42 network, is a project-based and peer-to-peer learning program with no traditional teachers or classes. Students learn through hands-on projects and collaboration, fostering self-reliance and critical thinking.
- Developed skills in multiple programming languages such as C, C++, Python, and JavaScript, while gaining experience with tools and technologies like Docker, PostgreSQL, and React.
- Worked on diverse projects in areas such as algorithms, web development, DevOps, and low-level programming, enhancing problem-solving and teamwork abilities.
- **School Website:** <https://1337.ma/en/>.
- **Academic Results:** [https://abouramd.me/asstest/docs/academic\\_results\\_for\\_abdelhay\\_bouramdane.pdf](https://abouramd.me/asstest/docs/academic_results_for_abdelhay_bouramdane.pdf).

## Projects

### Real-Time Chat

Personal Project

FULL-STACK WEB APPLICATION

Ongoing

- Designed and developed a real-time chat application with a scalable full-stack architecture, including user authentication, and the ability to create rooms and chat with other users.
- Integrated real-time communication functionality using Socket.io, enabling seamless and instantaneous message delivery between users.
- Deployed the application using Docker, ensuring portability, consistency, and ease of deployment across various environments.
- Gained hands-on experience and deep insights into full-stack development, real-time systems, and deployment workflows through this project.
- **Tools Used:** Next.js with TypeScript for front-end development, Express.js with JavaScript for back-end development, Git for version control, JWT for authentication, Swagger for API documentation and testing, Prisma ORM for database management, PostgreSQL for database implementation, and Docker for containerization and deployment.

### Pong Contest Website

Team Project in 1337 - (Github)

FULL-STACK WEB APPLICATION

17-08-2024

- Designed and developed a robust, scalable website for the "Mighty Pong Contest" using a microservices-based backend architecture and a vanilla js in front end for a seamless user experience.
- Implemented a backend solution with Django, GraphQL, Kafka, Docker, Gunicorn, and PostgreSQL to ensure scalability, flexibility, and efficient data handling.
- Utilized GraphQL for optimized data querying, Django for rapid development, and Kafka for enabling efficient communication between microservices. PostgreSQL was used for data integrity and performance.
- Built a front-end application with Vanilla JavaScript, Bootstrap, and CSS to create a responsive and user-friendly single-page app for the online Pong game.
- Integrated 3D Pong gameplay using Three.js and real-time multiplayer support via WebSockets, allowing players to interact and compete in an immersive game environment.
- Deployed the entire application with Docker, ensuring consistent development, testing, and production environments, and used Gunicorn to serve the Django application in a production-ready environment.
- Gained hands-on experience with microservices architecture, real-time multiplayer game integration, 3D rendering, and full-stack deployment.
- **Tools Used:** Django, GraphQL, Kafka, Docker, PostgreSQL, Three.js, WebSockets, Vanilla JS, Bootstrap, CSS.

## Webserv

Team Project in 1337 - (Github)

CUSTOM HTTP SERVER IMPLEMENTATION

23-11-2023

- Developed a custom HTTP server from scratch in C++98 to deepen understanding of web server functionality and the HTTP protocol.
- Implemented support for HTTP/1.1, including handling of GET, POST, and DELETE methods for flexible request management.
- Designed the server to be configurable via a configuration file, allowing users to easily modify settings without code changes.
- Enabled static website hosting, file uploads, and CGI (Common Gateway Interface) support for dynamic content generation.
- Utilized non-blocking I/O with the 'select()' system call for efficient request handling and concurrency.
- Implemented custom error pages and robust error handling to ensure clarity and reliability for users and administrators.
- Gained hands-on experience with low-level network programming, HTTP protocol mechanics, and server performance optimization.
- **Tools Used:** C++98, Make, 'select()' for non-blocking I/O, custom error handling.

## Inception

Solo Project in 1337 - (Github)

SYSTEM ADMINISTRATION AND INFRASTRUCTURE MANAGEMENT

25-03-2024

- Developed a small infrastructure using Docker to gain hands-on experience with system administration concepts and practices.
- Set up the entire project on a virtual machine, using Docker and Docker Compose to create and manage containers for each service.
- Created custom Docker images with Alpine and Debian (penultimate stable version) to build services such as NGINX, WordPress + php-fpm, and MariaDB.
- Configured NGINX with TLSv1.2 and TLSv1.3 for secure web traffic, and ensured proper security measures, including using environment variables and avoiding passwords in Dockerfiles.
- Set up volumes for the WordPress database and website files, ensuring persistent storage across container restarts.
- Implemented Docker networking to allow smooth communication between containers and configured domain setup (login.42.fr) to point to the local IP address.
- Utilized a Makefile and docker-compose.yml to automate the setup of the entire application, streamlining deployment and maintenance.
- Added bonus features including Redis cache, an FTP server, a static website, and Adminer for database management.
- Focused on implementing best practices for Docker usage, security considerations, and multi-container application deployment.
- Gained experience in microservices architecture, DevOps practices, and working with a range of technologies such as NGINX, SQL, PHP, Redis, SSH, and SSL.
- **Tools Used:** Docker, Docker Compose, NGINX, MariaDB, WordPress, Redis, PHP, Adminer, SSL, FTP, Shell Scripting.

## Skills

<b>DevOps</b>	Docker, Docker compose
<b>Back-end</b>	Node.js, Express, REST API, GraphQL, swagger, prisma, PostgreSQL
<b>Front-end</b>	Shadcn, React, Next.js, HTML5, CSS, SASS, tailwind CSS, Bootstrap
<b>Programming</b>	JavaScript, Python, C, C++, SQL, Bash Scripting
<b>Languages</b>	Arabic, English

## Extracurricular Activity

### Coding Competitions

Global

COMPETITIVE PROGRAMMER

2022 - PRESENT

- Actively participate in competitive programming since 2022, competing in various coding contests on platforms such as CodinGame.
- Successfully solved over 250 problems on LeetCode, improving problem-solving skills and algorithmic thinking.

### XAD Hackathon (hosted by 1337)

1337 Ben Guerir

PARTICIPANT & SECOND PLACE WINNER

2024

- Competed in the XAD Hackathon hosted by 1337, securing second place for the innovative solutions provided during the event.

### Think AI Hackathon 2024

1337 Ben Guerir

ORGANIZER

2024

- Organized the Think AI Hackathon 2024, a competitive event focused on AI and innovation, hosted by I 1337.

## Online Profiles

**GitHub:** [github.com/abouramd](https://github.com/abouramd)

**LeetCode:** [leetcode.com/abouramd](https://leetcode.com/abouramd)

**LinkedIn:** [linkedin.com/in/abouramd](https://linkedin.com/in/abouramd)

**HackerRank:** [hackerrank.com/profile/abouramd](https://hackerrank.com/profile/abouramd)

**CodinGame:** [codingame.com/profile/a02769bc923e885e36be2e1367d86d645638184](https://codingame.com/profile/a02769bc923e885e36be2e1367d86d645638184)