# Achraf Ahrach

## Full Stack Developer

✉ achrafahrach44@gmail.com   📞 +212628224327   ⬤ Achraf Ahrach   in Achraf Ahrach

### *Technical Skills*
- Languages: C/C++, TypeScript/JavaScript, Python
- Technologies: ReactJS/NextJs, Tailwind CSS, Redux Toolkit, NodeJS/ExpressJS, RESTful API/GraphQL/WEBSocket, SQL Database, Git Docker, Drizzle ORM, Cloud (AWS, Azure, GCP, Cloudflare)

### *Experience*
**Full Stack Developer Intern** [6-month] – CORELABS-UM6P
Technologies: Next.js, PostgreSQL, Drizzle ORM, Tailwind CSS, RTK Query, REST APIs, JWT Authentication

- Developed and optimized both the frontend and backend of HSE, CORELAB, LIMS, and U-RESERVE using Next.js, focusing on performance and scalability.
- Designed and implemented RESTful APIs with secure authentication using JWT.
- Integrated RTK Query for efficient state management and API caching.
- Managed PostgreSQL databases with Drizzle ORM for type-safe queries and migrations, enforcing data validation with Zod.
- Ensured seamless user experience by collaborating with designers on responsive UI/UX.
- Deployed and managed application environments using Docker and Git workflows.

### *Projects*
**Lightweight Nginx | C++**
- Studied HTTP/1.1 RFCs and implemented a custom web server with NGINX to handle HTTP requests and server configurations.
- Applied Object-Oriented Programming (OOP) principles to create a modular, maintainable codebase, improving scalability.
- Optimized request processing by implementing efficient key-value mapping for headers, reducing response time by 15%.

**PingPong Web Game |** (Vanilla JS)JavaScript/TypeScript, Bootstrap CSS, PostgreSQL, Django, Django ORM, Socket.i
- Implemented efficient data fetching techniques, including caching strategies and RESTful API integration, reducing data retrieval time by 30%.
- Integrated JWT tokens for secure authentication and authorization, enhancing security across the app.
- Developed a seamless Single Page Application (SPA) with Vanilla JS for an optimized user experience.
- Built real-time chat functionality using WebSockets for fast and interactive communication.

**LIMS (Laboratory Information Management System) |** Next.js, TypeScript, Tailwind CSS, Drizzle ORM
- Built a web-based system to streamline laboratory workflows, automate sample tracking, and enhance data management.
- Implemented authentication with UM6P email for secure access and role-based permissions.
- Integrated a real-time notification system for better collaboration within laboratories.

**U-Reserve |** Next.js, TypeScript, Tailwind CSS, Drizzle ORM
- Created an online reservation system to optimize resource booking and scheduling.
- Implemented an intuitive dashboard for tracking reservations, approvals, and availability in real time.
- Integrated authentication with UM6P email to ensure secure access and prevent unauthorized bookings.

### Education
1337 Coding School (42 Network)
Completed one-third of the academic program (Level: 16)
• Relevant Coursework: Data Structures and Algorithms, Problem-solving, Software Design and Implementation, Web Development, Object-Oriented Programming