

# Nessal Zakaria Rachid

Full-Stack Developer | Passionate about Scalable Web Solutions

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## PROFILE

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Versatile Full-Stack Developer and final-year Computer Science student at ESI-SBA, passionate about building scalable, high-performance web applications. Skilled in Next.js, NestJS, and Express, with a strong foundation in API design, cloud deployment, and modern DevOps practices. Known for architecting clean, maintainable systems from scratch and integrating emerging technologies—including AI—to solve real-world problems. Proactive, fast learner, and deeply committed to continuous improvement and impactful development.

## EDUCATION

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**École Supérieure d'Informatique (ESI-SBA)**, Sidi Bel Abbès Sept 2021 – Present  
Engineering Degree in Computer Systems  
Relevant Coursework: Software Architecture, Distributed Systems, Web Technologies, Data Structures

## TECHNICAL SKILLS

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- **Front-End Expertise:** React.js, **Next.js**; expert in high-performance UIs, leveraging Next.js features like **SSG**, **SSR**, and **ISR** for superior SEO and speed.
- **Back-End & API Design:** NestJS (modular architecture, microservices), Node.js, Express.js; skilled in developing secure and scalable **REST/GraphQL** APIs with robust **JWT** authentication.
- **Languages & Styling:** TypeScript (primary), JavaScript (ES6+); modern styling with **Tailwind CSS** for rapid, utility-first UI development.
- **Data Management:** PostgreSQL, MongoDB, **Oracle DB**; advanced proficiency with **Prisma**, TypeORM, and Sequelize for efficient data modeling and complex query optimization.
- **DevOps & Cloud Deployment:** Git/GitHub, **CI/CD** (GitHub Actions), Docker; proven deployment experience on Vercel (Next.js), Google Cloud Platform (GCP), and Netlify.
- **Testing & Quality Assurance:** Test-Driven Development (TDD) using **Jest** and **Cypress**; focused on application performance optimization and Lighthouse auditing.
- **Architecture & Tools:** Microservices design, Agile/SCRUM methodologies; tools include Figma (collaboration) and Postman (API testing).

## EXPERIENCE

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### Full-Stack Engineer | Contract/Freelance

#### Seha Practo (eCommerce Platform)

September 2025 – December 2025

- Engineered and launched a production-ready pharmacy eCommerce platform from scratch, assuming sole responsibility for the entire full-stack architecture.
- Developed the highly performant front-end using **Next.js** (leveraging server components and best practices) and managed application state efficiently with **React Query** for optimal data fetching, caching, and synchronization.
- Built the robust and scalable back-end using **NestJS**, handling all core eCommerce logic, including product management, global state management, and secure user sessions (utilizing cookies).
- Implemented critical features such as a persistent shopping cart, secure checkout flows, and ensured the platform was fully **responsive** across all device types.
- Oversaw the entire **DevOps and deployment pipeline**, including setting up and managing an **AWS EC2 instance** server, configuring necessary server infrastructure, and automating deployments via **GitHub Actions/CI/CD**.
- Applied industry best practices across the codebase, focusing on performance optimization, maintainability, and code quality.

### Professional Internship | Full-Stack Developer

#### AI Baraka Bank

August 2025 – September 2025

- Developed a **fully responsive internal dashboard application** using the **Next.js 14** framework, ensuring high-quality user experience and modern design standards with **Shadcn/UI**.
- Implemented the back-end system with **NestJS**, creating secure and scalable **RESTful APIs** for managing visitor sign-ins, room availability, and meeting schedules.
- Designed and integrated a **smart scheduling algorithm** that dynamically suggests alternative meeting rooms when the preferred room is busy.
- The algorithm prioritized suggestions based on key factors: **meeting priority level**, **time constraints**, and the **number of attendees**, significantly optimizing resource allocation and reducing scheduling conflicts.
- Managed state and data flow across the application, delivering a robust system for tracking room free/busy status and meeting logistics.

### Back-End Developer

#### Incubator Management Platform

Feb 2025 – Jun 2025

- Developed a secure and scalable REST API using **NestJS** and **PostgreSQL** to manage incubators, user roles, and project lifecycles.
- Implemented role-based access control, project status tracking, and efficient database schema design.
- Collaborated with the front-end team (**React.js**) and ensured smooth deployment via **CI/CD pipelines**.

## Full-Stack Developer

Unitary – London, UK

Aug 2024 – Jan 2025

- Built and maintained full-stack features for an AI-driven content moderation platform, using **Next.js** for the frontend and **NestJS** for the backend.
- Designed RESTful APIs, optimized **PostgreSQL** queries, and implemented caching strategies to enhance system scalability.
- Delivered responsive dashboards for clients and internal teams, improving user experience and reporting efficiency.
- Collaborated on **Docker**-based deployments and **CI/CD** workflows, ensuring smooth releases on **AWS** infrastructure.

## Back-End Developer

University Project – Overtime Hours API

Jan 2024 – May 2024

- Developed a REST API with **Express.js** to manage employee overtime records.
- Designed relational database schema and secured endpoints with **JWT**-based authentication.
- Implemented unit tests with **Jest** and collaborated in an agile, Git-based workflow.

## Full-Stack Developer

Personal Projects – Sidi Bel Abbès

Dec 2021 – Present

- Designed and deployed full-stack applications using **Next.js**, **NestJS**, and **Express.js**.
- Built secure REST APIs with **MongoDB/PostgreSQL** backends for scalable data management.
- Established **CI/CD** pipelines and deployed projects on **Vercel**, **GCP**, and **Netlify**.

## PROJECTS

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### Smart Resource Scheduling Dashboard

- Developed a comprehensive internal dashboard using **Next.js** and **Shadcn/UI** for visitor management and real-time tracking of room availability and meeting schedules
- Engineered a robust **NestJS** backend with secure, scalable REST APIs for resource management, user authentication, and meeting logistics
- Designed and implemented an intelligent scheduling algorithm that dynamically suggests alternative meeting rooms based on priority level, time constraints, and attendee count
- Built real-time status updates for room availability, visitor check-ins, and meeting schedules with optimized database queries

### Pharmacy eCommerce Platform (Seha Practo)

- Architected and developed a production-ready pharmacy eCommerce platform from scratch using **Next.js** and **NestJS** full-stack architecture

- Implemented **React Query** for efficient data fetching, caching, and global state management, significantly improving front-end performance
- Built core eCommerce features including persistent shopping carts, secure user sessions with cookies, product catalog management, and responsive checkout flows
- Configured and managed **AWS EC2** server infrastructure, set up automated deployments via **GitHub Actions/CI/CD**, and ensured high availability

### **Incubator Management Platform**

- Developed a full-stack web platform to manage startup incubators, track project lifecycles, and handle multi-role user management
- Built a secure **NestJS** backend with **PostgreSQL** database, implementing role-based access control (RBAC) and comprehensive audit logging
- Created a responsive **React.js** frontend with intuitive dashboards for project tracking, user management, and reporting
- Established automated **CI/CD pipelines** and deployed the application on **Vercel** for seamless updates and scalability

### **Real-Time Chat Application**

- Built a real-time messaging platform using **NestJS** with **WebSockets** for instant communication and **React** for the frontend interface
- Implemented secure **JWT authentication**, message persistence with **MongoDB**, and real-time features including typing indicators and online status
- Designed scalable architecture with room-based messaging, user presence tracking, and message history management
- Containerized the application with **Docker** and automated deployments through **CI/CD pipelines** for production reliability

### **Car Rental Platform**

- Developed a feature-rich car rental web application using **Next.js** with **Server-Side Rendering (SSR)** and **Static Site Generation (SSG)** for optimal performance
- Implemented comprehensive booking workflows, advanced vehicle search and filtering, user authentication, and integrated payment processing
- Built responsive vehicle listings with detailed specifications, availability calendars, and booking management system
- Optimized for **SEO**, mobile responsiveness, and achieved high performance scores through **Lighthouse audits** and code optimization

### **Telegram Collaboration Bot**

- Developed a sophisticated Telegram bot using **NestJS** with **Telegraf** framework to support trading team collaboration and workflow automation
- Integrated external **APIs** for real-time market data and financial news, delivering timely updates and alerts directly in Telegram chat
- Implemented automated workflows for trade notifications, team coordination, and decision-making support with customizable alert systems
- Designed a modular, containerized architecture with **Docker** and configured webhooks for high availability and scalability

### **SNMP Network Monitoring Dashboard**

- Built a comprehensive **Next.js** dashboard to visualize **GNS3** network topologies and monitor **SNMP**

metrics in real time

- Implemented **OID queries** for system performance monitoring, including CPU usage, memory consumption, and network traffic metrics
- Developed automated alerting system for fault detection, network anomalies, and performance threshold violations
- Designed scalable interface for real-time monitoring of multiple network devices in simulated and production environments

## PROFESSIONAL STRENGTHS

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- **End-to-End Ownership:** Architect, develop, and deploy full-stack solutions with scalability and maintainability in mind.
- **Rapid Learning:** Quickly grasp new frameworks and tools through hands-on projects and self-driven research.
- **Clean Code Practices:** Write modular, testable, and industry-standard code that ensures long-term maintainability.
- **Problem Solving:** Diagnose and resolve complex technical issues, optimizing performance and reliability.
- **Team Collaboration:** Contribute effectively in agile environments, using Git-based workflows and peer reviews.
- **Adaptability:** Thrive in dynamic settings by adjusting to evolving tech stacks and shifting priorities.