

Mohamed Nouichi

Software Engineer | React, Next.js, Node.js, FastAPI | Scalable Web Systems

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Skills

- **Frontend Development:** Next.js, React, HTML, CSS (TailwindCSS)
- **Programming & Scripting:** Typescript & Javascript, Python (FastAPI, NumPy, Pandas), SQL (MySQL, PostgreSQL, NoSQL), GraphQL
- **Tools & Practices:** Git, CI/CD, Agile, Integration testing, Docker, JWT, AWS, Figma, Supabase, Firebase

Experience

University of Sharjah

March 2025 - Current

Web Junior

- **Executed large-scale platform migration** of 15+ legacy web pages to Azure Sitecore CMS architecture, implementing optimized content delivery networks and modern HTML5/CSS3 standards that achieved 45% improvement in Core Web Vitals and reduced server response times to <200ms.
- **Re-engineered website infrastructure** by refactoring 100+ content modules and implementing structured data markup across 8 content types, delivering consistent 45% load time improvements and boosting SEO performance scores by 35% through technical optimization.
- **Led comprehensive AI chatbot procurement initiative** evaluating 12+ enterprise solutions, orchestrating 5 multi-stakeholder demonstration sessions with 20+ participants, and delivering detailed technical assessments including ROI analysis, integration requirements, and proof-of-concept implementations that guided \$50K+ strategic technology investment decisions.

Rapidstart

September 2024 - March 2025

Frontend Developer

- **Architected and deployed a scalable full-stack web application** using Next.js framework with React components and TailwindCSS styling, implementing server-side rendering and API route optimization that delivered 30% performance improvements in page load metrics.
- **Engineered responsive UI/UX architecture** with mobile-first design principles ensuring 100% cross-browser compatibility across 5+ devices/screen sizes, while orchestrating seamless RESTful API integrations with 3+ backend services to maintain 99.9% data consistency across multi-platform environments.
- **Optimized application performance** through advanced routing strategies and lazy loading implementation reducing bundle size by 25%, and established automated CI/CD pipelines using GitHub Actions for continuous integration, automated testing, and zero-downtime deployments cutting manual deployment time by 80%.

Education

University of Sharjah

March 2021 - May 2025

B.S. Computer Engineering

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Embedded Systems, Computer System Architecture, Artificial Intelligence, Mobile App Development, Software Engineering, Object Oriented Programming, and more.

Projects

AI-Powered Voice Learning Platform

- Built full-stack voice-enabled learning platform using Next.js, TypeScript, and AWS microservices that transforms PDF/PPTX documents into interactive AI tutoring conversations with <500ms voice latency.
- Implemented secure authentication (OAuth) and real-time data handling through Supabase and WebSockets, ensuring robust user session management.
- Architected dual-LLM system (Claude 3.5 Sonnet + GPT-4o-mini) with intelligent document processing pipeline and cost-optimized fallback mechanisms, integrating 8+ services including Supabase, VAPI, and Clerk.

Beehive Monitoring System

- **Architected scalable IoT infrastructure** using ESP32 microcontrollers with 6+ integrated sensors (temperature, humidity, weight, vibration) connected via RESTful APIs to FastAPI backend, processing 10,000+ data points daily and eliminating 75% of manual monitoring tasks through automated real-time data collection.
- **Developed cloud-native data platform** with Python/FastAPI microservices architecture handling 500+ concurrent API requests, implementing machine learning algorithms for predictive analytics that achieved 85% accuracy in colony health predictions and reduced diagnostic response time by 60%.
- **Built cross-platform mobile application** using Flutter framework with real-time WebSocket connections, featuring 12+ interactive Plotly visualization components that process streaming sensor data from 25+ IoT nodes, delivering actionable insights through custom algorithms analyzing 50+ behavioral patterns and environmental correlations.