

Iheb Belhadj

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Summary

Software engineer specializing in backend systems, data pipelines, and agentic AI. Experienced in building cloud-native applications, multi-agent systems, and scalable infrastructure for data-driven solutions.

Technologies

Languages: TypeScript, Python, JavaScript, Java, C#, C, SQL, PHP, Bash
Web/Fullstack: Next.js, React, Astro.js, Angular, Vue.js, Express.js, Spring, Flask, FastAPI
Databases: PostgreSQL, MySQL, MongoDB, Redis, MinIO, AWS RDS, S3
Data Eng & AI: Airflow, Airbyte, dbt, Kafka, Spark, LangChain, LangGraph, MLflow
Infrastructure: Docker, Kubernetes, Ansible, Vagrant, Jenkins, GitHub Actions, AWS

Experience

Software Engineering Intern, Talan – Tunis, TN Feb 2025 – Aug 2025

- Integrated a multi-agent system with LangGraph for dynamic SQL and chart generation, enabling no-code data exploration.
- Built a real-time CDC pipeline refreshing charts live, enabling instant monitoring.
- Developed an end-to-end data pipeline with MinIO, Airflow, Airbyte, and dbt to manage ingestion, transformation, and ML forecasting.
- Secured the platform with Keycloak IAM using role- and group-based access control , and built an Nginx gateway to secure the private services network.
 - Technologies used: Python, FastAPI, Next.js, LangGraph, LangChain, MLflow, MinIO, Airflow, Airbyte, dbt, PostgreSQL, Keycloak, Docker, Nginx

Freelance Job, Nexits – Paris, FR Dec 2024 - Jan 2025

- Architected a CMS solution with Payload CMS and a custom block-based page builder, enabling no-code content updates for the landing site.
- Built an instantaneous preview system using Astro.js for dynamic component rendering with minimal JS.
- Designed a dual rendering strategy (SSR for preview, SSG for production), achieving 100 performance, 95 accessibility, and 100 SEO score on Lighthouse.
 - Technologies used: Astro.js, Payload CMS, Next.js, React, TypeScript, SQLite, Turborepo

Software engineer, Nexits – Paris, FR Aug 2023 - Sep 2024

- Implemented product state historization with audit trail, enabling edits, rollbacks, and time-travel of product data.
- Contributed to migration from legacy stack to Next.js, tRPC, and Turborepo monorepo with AWS deployment.
 - Technologies used: Next.js, React, TypeScript, Node.js, tRPC, PostgreSQL, AWS (EC2, ECR, S3, RDS), Docker, GitHub Actions, Turborepo

Freelance instructor (Weekends), ENET'Com Junior Entreprise – Sfax, TN Oct 2023 - Nov 2023

- Conducted workshops over the weekends on web development using the MERN stack (MongoDB, Express.js, React, Node.js) teaching more than 30 junior club members.

Software Engineering Intern, Nexits – Paris, FR June 2023 - Aug 2023

Projects

- **Portfolio:** Built on Next.js with MDX-based content management, lazy loading, and server components. Integrated a LangChain agent that answers questions about my experience. Achieved 100 performance and best practices scores on Lighthouse.
 - Technologies used: Next.js, LangChain, Vercel
- **EldSync:** Contributed to building a Java microservices application with Spring Boot, Spring Security, and an API Gateway, integrating Angular with Apollo Client and NgRx for state management.
- **OpsForge:** A self-contained local DevOps environment simulating production using Vagrant and Ansible. Includes a private Docker registry, Jenkins CI/CD, monitoring stack with Prometheus/Grafana, and SonarQube.
 - Technologies used: Ansible, Vagrant, Docker, Jenkins, Prometheus, Grafana, SonarQube, Bash
- **Playpex:** Torrent streamer in Node.js with backend wrapper using MSE API for seamless browser playback. Angular frontend, Electron desktop app to bundle the engine and the frontend, and Ionic mobile controller.

Education

Software engineering, ESPRIT Sept 2022 – Sep 2025

Pre-engineering school (Math-Physics: Rank 626), IPEIM Sept 2020 – Juin 2022