

Iheb Belhadj

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Summary

Software engineer specializing in backend systems, data pipelines, and production-grade agentic systems. Experienced in architecting scalable backend services, building cloud-native applications, and developing agentic AI pipelines.

Technologies

Languages: JavaScript, Typescript, Python, C#, C, SQL, Java, PHP, Bash

Fullstack dev Spring, Express.js, Flask, FastAPI, React, Next.js, Astro.js, Angular, Vue.js

Databases: MySQL, PostgreSQL, MongoDB, Redis, DuckDB, MinIO, RDS, S3

Data eng & Agentic AI: Airflow, Airbyte, dbt, Kafka, Spark, Langchain, LangGraph

Infrastructure, DevOps & Cloud : Docker, Kubernetes, Terraform, Ansible, Vagrant, Jenkins, GitHub Actions, AWS

Experience

Software Engineering Intern, Talan – Tunis,TN

Feb 2025 – Aug 2025

- Integrated a multi-agent system with LangGraph, dynamically generating SQL queries and charts enabling no code data exploration and visualization.
- Built a real-time change data capture (CDC) system, automatically refreshing generated charts when source data changed, enabling live data monitoring.
- Developed an end-to-end data pipeline with MinIO, Delta Lake, Airflow, and dbt to streamline ingestion, transformation, and storage, while orchestrating ML forecasting jobs.
- Secured the platform using Keycloak IAM, implementing role- and group-based fine-grained access control.
 - Technologies used: Python, FastAPI, Next.js, LangGraph, LangChain, MLflow, MinIO, Delta Lake, Airflow, dbt, PostgreSQL, Keycloak, Docker, Nginx

Freelance Job, Nexits – Paris, FR

Dec 2024 - Feb 2025

- Architected and developed CMS solution, leveraging Payload CMS and a custom-built, block-based page builder enabling nexits team to create new pages and edit content Nexits landing website with no code
- Instantaneous Preview system that dynamically build components from declarative config from the CMS using Astro.js for minimal JS on build
- Dual rendering strategy with SSR for preview mode and SSG for production build achieving 100 performance score on Google Lighthouse 95 accessibility and 100 seo score on production landing website using this architecture
 - Technologies used: Astro.js, Payload CMS, React, TypeScript, Vercel, SQLite, Turborepo

Software engineer, Nexits – Paris, FR

Aug 2023 - Sep 2024

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

Freelance instructor, 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

- **Playpex:** Built a torrent streamer in Node.js with a backend wrapper utilizing MSE API for seamless browser playback. Frontend developped in Angular. Electron to bundle the app for cross-platform and an ionic mobile app as a remote controller.
 - Technologies used: Node.js, Angular, Ionic, Electron
- **OpsForge:** A self-contained local devlops environemnt to simulate a production evironment using provisioned VMs with Vagrant and Ansible. It includes a private docker registry, a jenkins CI/CD server, a monitoring stack with Prometheus and Grafana and a SonarQube service.
 - Technologies used: Ansible, Vagrant, Docker, Jenkins, Prometheus, Grafana, SonarQube, Bash
- **_my_portfolio:** A personal portfolio built on next.js. It utilizes mdx files for easy content management, uses lazy loading and server components as much as possible achieving 100 performance score and 100 best practices score on Google Lighthouse. It also has an Agent in langchain that can answer questions about me, my projects and my experience.
 - Technologies used: Next.js, langchain, Vercel

Education

Masters in software engineering, ESPRIT	Sept 2022 – Sep 2025
Bachelor in applied math and physics, IPEIM	Sept 2020 – Juin 2022