

Iheb Belhadj

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Summary

An engineer specializing in backend systems and data pipelines. I thrive in complexity, designing scalable, resilient architectures that keep systems running smoothly and teams moving forward.

Experience

Software Engineering Intern, Talan – Tunis, TN

Feb 2025 – Aug 2025

- End of masters project which is AI first analytics platform for business users to explore and analyze data with natural language
- Integrated a multi-agent system using LangGraph for natural language querying and chart creation that works with any type of data and can integrate rag systems and other inputs using MCP
- A change data capture system to automatically update generated charts upon data update for real-time analytics
- Developed an end to end data pipeline using minio, delta lake, airflow and dbt for data ingestion, transformation and storage as well as orchestrating other jobs like launching ML predictions and forecasting jobs
- Using Keycloak as a centralized IAM solution for both the client application as well as data access management with fine grained access control using roles and groups

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
- Achieved 100 performance score on Google Lighthouse 95 accessibility and 100 seo score on production landing website using this architecture

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.
- Contributed in the deployment and management of monorepo services on AWS as well as CI/CD pipelines using GitHub Actions.

web dev intern, Nexits – Paris, FR

Aug 2023 - Sep 2024

- Worked on a dashboard feature to extract and visualize data using chart js and integrating the feature in the client interface
- Implemented data export functionality to csv or xlsx formats with the formatting and structure of choice

Projects

Dev env portfolio

github.com/name/repo

- My portfolio website built with Next.js , showcasing my projects and experiences in a dev environment looking UI
- Responsive design, as well as 100 performance score on Google Lighthouse, 93 accessibility and 100 seo score

OpsForge

github.com/name/repo

- A running ops management system on a vagrant VM containing up and running tools for monitoring, log management and a Jenkins server for CI/CD operations listening to GitHub webhooks to trigger jobs on new commits

Playpex

github.com/name/repo

- Built a streaming torrent client on running in a node js runtime with a wrapper backend that utilizes media source extensions API to stream any torrent in a web player
- Developed a TV like user interface in Angular, optimized for remote and keyboard navigation for a living-room experience.

- bundling the torrent streamer and other backend services with the client application using electron
- Created a companion mobile controller app with Ionic, communicating over WebSockets for remote playback control.

Technologies

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

Backend dev Spring, .NET, Express.js, Django, Flask, FastAPI

Frontend dev React, Next.js, Astro.js, Angular, Vue.js

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

Data eng: Airflow, Airbyte, dbt, Kafka, Spark

Agentic AI: LangChain, LangGraph, CrewAI, AutoGen

Cloud: AWS (EC2, S3, RDS, Lambda), GCP (Compute Engine, Cloud Storage, Cloud SQL)

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

Education

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