

Houssem Zerrad

Backend & Platform Engineer

Open to senior backend and platform roles, full-time or long-term contract, via Deel or direct B2B · CET (UTC+1)

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SUMMARY

Senior backend and platform engineer with 8 years on cloud-native backend and data platforms. I design and evolve distributed systems end-to-end: service boundaries and API contracts, event-driven pipelines, schema design, and production operations on Kubernetes across AWS, GCP and Azure. Primarily Go, Python and TypeScript/Node.js, with a focus on data correctness, query performance, and reliability.

EXPERIENCE

Senior Backend Engineer - Contract, Ordaos Bio

October 2024 - October 2026 · New York, United States - Remote

- Owned the backend and data platform across several Python services (FastAPI APIs, ETL and ML pipelines, a job monitor, CLI tooling). Reported directly to the CTO on platform direction.
- Redesigned the ingestion and retrieval paths of the core data pipeline; end-to-end time across the endpoint family, payload transfer included, fell by about 70%.
- Cut a critical API endpoint's response time from 143s to 110ms, and a key query from 13.6s to 1.23s.
- Wrote the Redis caching strategy for the production APIs (which endpoints to cache, TTLs, invalidation) and drove its adoption across the team.
- Defined the shared conventions for service boundaries and API contracts that every service follows.

Stack: Python, FastAPI, Redis, Go, Kubernetes, GCP, Azure.

Lead Software Engineer, Master Technology Computers

July 2023 - October 2024 · Algeria - On-Site

- Tech lead on Sefar, a Shopify-style storefront platform on Laravel, from planning to production rollout with a multi-developer team: scope, sequencing, and the quality gates. It shipped on schedule.
- Designed and built its GCP architecture as code on the same model as the marketplace app: network and IAM, the data and caching tiers, and the service runtime.
- Wrote the team's engineering standards and review checklists and rolled them out; code review cycle time dropped by about 15%.

Stack: Laravel, GCP, Pulumi.

Senior Software Engineer - Full-Time, Master Technology Computers

October 2020 - July 2023 · Algeria - On-Site

- Designed and led the decomposition of Fetch, a marketplace app where anyone posts offers to sell or needs to buy, from an Elixir monolith into event-driven services with Event-sourcing.
- Designed and built its entire GCP architecture as code, Terraform then Pulumi: network and IAM layout, the data and caching tiers, autoscaling for the real-time tier, and the service runtime.
- Moved phone-contact synchronization, ejabberd presence (who sees whom, based on mutual contacts) and SMS notifications off the synchronous request path onto distributed processing.
- Set up the app's chat and calling stack: ejabberd for messaging and media sharing, with STUN/TURN and ICE for audio and video calls.
- Built the authentication system: two-factor authentication and user identity management.
- Built the CI/CD pipeline. Time to deploy went from a day to about 40 minutes.

Stack: Elixir, GCP, Terraform, Pulumi, ejabberd.

Founding Engineer - Contract, Fortune.app

October 2023 - April 2024 · Montreal, Canada - Remote · Part-time, alongside Master Technology Computers

- Led the backend migration from JavaScript to TypeScript across the API layer.
- Built the multi-tier subscription logic and the real-time currency exchange behind the iOS app.
- Built and maintained the REST APIs, with OAuth-based authentication.

Stack: TypeScript, Node.js, Expo, GCP, Auth0.

Senior Software Engineer - Contract, IntegrationOS

July 2022 - July 2023 · Ontario, Canada - Remote · Part-time, alongside Master Technology Computers

- Designed and built the stream, queue and workflow primitives the integrations platform runs on, with Event-sourcing.

- Wrote the contract conventions that source and target integrations are built against, so one dispatcher covers about 125 vendor actions instead of a handler per action.
- Built 10+ source integrations and 6+ target integrations, including GitHub and Shopify.
- Top external contributor to IntegrationOS's open-source Core repository.

Stack: TypeScript, Rust, Kafka.

Software Engineer - Contract, **FelixSmart Inc.**

March 2020 - October 2020 · Calgary, Canada - Remote

- Rebuilt the smart-aquarium firmware after a critical regression and got it working in production again.
- Built the real-time link between the aquarium hardware and the Firebase backend that the mobile app reads from.

Stack: MicroPython, C++, Firebase.

Freelance Software Engineer, Self-employed

2018 - 2020 · Remote

- Delivered backend and web projects for local and international clients while completing an MSc in Computer Science.
- Built a server for managing multiple Linux machines over HTTP for an international client, a news and events website for a local scouts group, and debugged and deployed a CMS for a local business.

SELECTED PROJECTS

CloudCare: EHR for Algerian private clinics

Co-founder & Engineering Lead, 2025 - 2026. Stepped back in September 2026.

- Owned the platform architecture for an electronic health-records system built around in-country data residency for the Algerian private-clinic market.
- Built authentication/authorization (Keycloak, OPA, a custom Go auth-broker), application-layer encryption (HashiCorp Vault + cloud KMS), and a PostgreSQL/MinIO storage layer with audit and golang-migrate schema evolution.

Stack: Go, PostgreSQL, MinIO, Keycloak, OPA, Vault, AWS KMS.

cronkit: A CLI for auditing cron schedules

Open source. Go. Released January 2026.

- CLI that explains, validates, and audits cron expressions and whole crontab files (overlaps, runaway frequencies, command hygiene); outputs text/JSON reports and ASCII timelines, distributed via Homebrew, .deb, .rpm, and the AUR.

Stack: Go.

github.com/hzerrad/cronkit

EnsVAE: Ensemble Variational Autoencoder for Recommender Systems

MSc research. Python, TensorFlow. Published 2020.

- A variational-autoencoder method for merging multiple independently-trained expert models into a shared latent space, with the base models swappable per domain; applied to recommendation via a GloVe + GRU pairing.

Stack: Python, TensorFlow, Keras.

[Paper on IEEE Xplore](#) · github.com/hzerrad/ensvae

SKILLS

Languages Go · Python · TypeScript · Node.js · SQL

Architecture & Systems System Design · Software Architecture · Distributed Systems · Microservices · Event-Driven Architecture · Domain-Driven Design · REST APIs · gRPC

Data PostgreSQL · Redis · MongoDB · Elasticsearch · BigQuery · Data Modeling · Query Optimization · ETL

Cloud & Infrastructure GCP · AWS · Azure · Kubernetes · Docker · Terraform · Pulumi · Helm · Linux · CI/CD · Infrastructure as Code

Reliability & Operations Observability · OpenTelemetry · Prometheus · Grafana · Reliability Engineering · Performance Tuning

EDUCATION

MSc Computer Science, Artificial Intelligence · 2020

LANGUAGES

English: Fluent · French: Fluent · Arabic: Native