Ahmed Ismail

Technical Lead

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Who

Ahmed H. Ismail

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Summary:

Senior full-stack engineer and technical lead with 10+ years shipping modern web products and high-throughput services. Product minded and comfortable owning features end to end across React and Next.js on the frontend and Node and Nest on the backend, with strong data modeling in Postgres or Timescale and caching in Redis. I have built AI-powered and real-time experiences, run Elasticsearch in production for custom relevance, and used Kafka for messaging at scale. Quality and reliability are non-negotiable for me: typed contracts, automated tests, CI, observability, and clear performance budgets. Infra experience includes Docker, AWS, Kubernetes on EKS, GitOps with FluxCD, and IaC with Pulumi, plus Terraform familiarity. Based in Porto, Portugal, I can engage internationally via my Portuguese LLC and keep solid overlap with EU and US time zones.

Strengths:

- Frontend: React, Next.js, TypeScript, component architecture, accessibility, Playwright E2E
- Backend: Node.js, Python, REST and GraphQL APIs, validation, pagination, rate limits
- Data layer: Postgres or Timescale, complex SQL, indexing, partitioning, materialized views, read replicas. NoSql experience as well
- Caching and queues: Redis, BullMQ or SQS, idempotency keys, outbox pattern, backpressure, DLQs
- Real time UX: SSE and WebSockets, optimistic UI, low time-to-first-byte and p95 targets
- AI features: OpenAI GPT-4, RAG, prompt versioning, function calling, eval harnesses, safe streaming
- Search and messaging: Elasticsearch relevance tuning and custom ranking, Kafka consumer groups and lag controls
- Web3 integrations: ethers.js (primary) and viem, providers like Alchemy, SimpleHash, Reservoir, finality windows and reorg handling, chains including Ethereum, Polygon, Aptos, Tari
- Ruby on Rails: production apps, Sidekiq-style workers, Action Cable, SELinux sandboxed code execution for an edtech auto-grading platform
- Observability: Datadog or Prometheus, Grafana, Loki, OpenTelemetry tracing, SLOs on p95 and p99

- Testing and CI/CD: Vitest or Jest, Playwright, contract tests, GitHub Actions, trunk-based development, feature flags, canaries, quick rollback
- Security and privacy: input validation, authz boundaries, rate limiting, secrets hygiene, least-privilege IAM
- Infra and platform: Docker, AWS, Kubernetes on EKS, GitOps with FluxCD, Pulumi for IaC, Terraform familiarity
- Performance: profiling hot paths, query tuning with EXPLAIN or ANALYZE, caching strategies, connection pooling
- Architecture: modular monoliths and microservices, BFF patterns, multi-tenant SaaS, session and read-after-write consistency strategies
- Collaboration and leadership: mentoring, code reviews, concise design docs, clear specs with product and design, steady delivery in distributed teams

Core Stack:

- TypeScript, React, Next.js, Tailwind
- State mgmt (Redux/RTK, React Query)
- Node.js/NestJS, RPC/REST
- Postgres/Timescale, Redis and ElasticSearch
- Testing (Vitest, Playwright, Jest)
- C++ & Python
- Docker, AWS, GCP, kubernetes, pulumi & fluxCD
- Websockets and SSE for real time UIs and streaming

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Technical Skills

Programming Languages: C++, C, Javascript, Typescript, Python, Ruby, Prolog, Rust & Java.
Frameworks: Ruby on Rails, django, flask, sinatra, nodejs, Nextjs, React & Nestjs.
Tools & Services: Redis, memcached, nginx, Postgresql, MongoDB, DynamoDB, AWS lambda, ElasticSearch, kafka, TimescaleDB & docker.

Professional Experience

Refound / Software Engineering Manager

Feb 2025 - May 2025, Remote

Lead architect and team lead on an agentic leadership coaching platform. Working with React, Next.js and Python.

- 5k active users
- Leading a team of 5 engineers
- Introduced CI/CD pipeline
- High test coverage using vitest and playwright

Tari Labs / Technical Lead

May 2022 - Feb 2025, Remote

Lead architect and team lead on cross chain web3 data aggregation and analysis platform along with providing developer tooling and infrastructure for the rest of the company. We are proud to boast a 97% code coverage rate while scaling to millions of requests and events per hour. The system is designed as an event driven system analysing data in realtime across multiple chains.

QMedic / Senior Developer

Dec 2018 - July 2019, Remote

QMedic designs its own wearable medical devices, I worked as a full stack developer building internal telemetry and analytics infrastructure for the company. Collecting analytics from IoT devices and visualizing it for stakeholders.

Dreidev/ Senior Full Stack Developer

Jan 2017 - Nov 2018, Remote

Full stack developer for a software house. Continuously delivered webapps with a focus on usability, seamless and intuitive UX. First fully remote role, allowed me to attain the experience and skills to self manage and continuously deliver value in a remote workplace.

Paymob/ Software Engineer

Jan 2016 - Dec 2016, Cairo, Egypt

Gained experience working in the fintech industry gained ability to understand and translate regulatory requirements to project specifications.

Worked on highly scalable backends for mobile wallets.

Eventtus / Software Engineer

Sep 2015 - Jan 2016, Cairo, Egypt

Modernized an aging codebase.

Education

German University in Cairo / BSc. Computer Science

2016, Cairo, Egypt

Also participated in google summer of code during the summer of 2014. Working on SPDX python tooling. During my time at the university I also served as a junior teaching assistant in the Software Engineering and introduction to computer science courses.

Certifications

Google Project Management Certification

https://coursera.org/share/a57f0a8091446714241be607c548701d

Comprehensive specialization for project management and how it's done at google. Not only qualifies me to work as a project manager but helps make me a much better technical lead.

Postgresql for everyone certification

https://coursera.org/share/dc3ed42f48dbfb3a7ad0f375fd82fc01

Postgresql techniques and inner workings.Most of the time just using the ORM for everything doesn't cut it.

AWS fundamentals Certification

https://coursera.org/share/c76ba6e13718a31c7262fed9601508d1

Other Projects

Askier

Language: C++

Application for creating ASCII art from images, videos and live camera feeds. https://github.com/a-h-i/askier

Midas algo trader

Language: C++

Algorithmic trader using IBKR API for momentum exploit. Trades futures and high volatility stocks. https://github.com/a-h-i/midas

spdx parser

Language: Python

Python parser libraries for the SPDX format.
Done as part of GsoC 2014. https://github.com/ah450/sdpx-tools-python

Proteus

Language: C++

Speech recognition library generator based on pocketsphinx for multiple

languages. https://github.com/ah450/proteus

Responder
Stack: Ruby + Sinatra
Auto deployment from github web hooks
https://github.com/ah450/responder

SIFT
Language: C++
https://github.com/ah450/SIFT
Scale Invariant Feature Transform implementation

AI2048
Language: Golang
https://github.com/muhammedabuali/AI2048 artificial intelligence
course project for the famous 2048 game

ObjectRecognizer
Language: Python
https://github.com/ah450/ObjectRecognizer
Naive Bayes classifier

Evaluator
Stack: Angularjs, Rails.
https://github.com/ah450/evaluator
Java submission runner and evaluator for GUC

Ngmedia
Stack: Angularjs.
https://github.com/ah450/ngmedia
Angular directive to remove elements based on media query match

Unification
Language: Python
https://github.com/ah450/unification
FOPL unification and CNF conversion

Whois
Language: C++
https://github.com/ah450/whois
A multithreaded basic whois commandline utility

Rootkit
Language: C
https://github.com/ah450/rootkit
Rootkit for linux kernel 3.x

TowersOfHanoi
Language: C++
https://github.com/ah450/Towers-of-Hanoi

Towers of Hanoi 3D

Cweather

Language: C++

https://github.com/ah450/cweather

cmd line weather tool