

ElMahdi Diab

Full-Stack Software Engineer

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PROFILE

1337 (42 Network) trained engineer with a proven track record of building production-grade platforms from scratch. Blends deep technical systems knowledge with real-world full-stack delivery, cloud infrastructure, and applied machine learning.

TECH SKILLS

Front-End

React.js / Redux / Tailwind CSS
JavaScript (ES6+), HTML5, CSS3
SPA Architecture, Vite

Back-End & API

Django / DRF, Node.js
RESTful APIs, GraphQL
JWT, OAuth2, API Gateway

Database & Cloud

PostgreSQL, MySQL, MariaDB
Redis (Caching / Sessions)
Firebase, Docker, K3s
Nginx, Linux, Git

Languages

Arabic	Native
English	Advanced
French	Intermediate

SOFT SKILLS

- ✓ Autonomy & Self-Discipline
- ✓ Collaborative Debugging
- ✓ Adaptability & Resilience
- ✓ Clear Communication
- ✓ Time Management

EDUCATION

1337 (42 Network)

Common Core & OutCore Specialization
2022 – 2027

Project-based, peer-learning pedagogy. Built 20+ systems, full-stack, and ML projects.

Baccalaureate

Mathematical Sciences A
2019 – 2020

SUMMARY

Engineer forged in the peer-to-peer, project-based crucible of 1337 (42 Network). This unique system cultivated not only deep technical mastery across the entire stack—from high-performance systems programming (C, C++) to scalable web backends (Python/Django, Node.js), cloud-native infrastructure, and applied machine learning—but also **exceptional soft skills**: autonomy, resilience, collaborative debugging, and the ability to deliver under tight deadlines with zero supervision.

Experienced in maintaining and enhancing software applications for various industries, collaborating with cross-functional teams to deliver robust, production-ready solutions. Eager to apply this blend of elite engineering discipline and practical delivery to new challenges spanning **web development, cloud infrastructure, and AI/ML**.

EXPERIENCE

Full-Stack Web Developer Intern

2025 · 6 months

African Genome Center (AGC) – UM6P | Supervised by Dr. Vittorio Venturi

- ▶ **Architected and developed** a full-stack web platform for quorum-sensing gene analysis across 1,800+ bacterial genomes.
- ▶ Built **Django/DRF API** with JWT rotation + Redis blacklist, async Celery pipelines, and a React/Vite SPA.
- ▶ Containerized the stack with **Docker** and deployed behind Nginx with TLS.
- ▶ Received official supervisor commendations for dedication, professionalism, and scientific insight.

Supervisor Quote: "It was a pleasure to host Mr. Elmahdi Diab... He proved to be skilled, motivated, and reliable. He made a meaningful contribution to the project."

Software Developer (Freelance / Contract)

2024 – 2025

Various Industries – Philippines (Remote)

- ▶ **Maintained and enhanced** logistics, e-commerce, and fintech applications ensuring high availability.
- ▶ Worked with **PostgreSQL, MySQL, Firebase**; designed REST/GraphQL APIs; integrated third-party services.
- ▶ **Collaborated** with remote cross-functional teams (PMs, QA, Design) to deliver features on schedule using Agile.
- ▶ Reduced average API response times by **30%** through query optimization and Redis caching.

Peer-to-Peer Engineering Training

2022 – Present

1337 (42 Network) – UM6P

- ▶ Completed **20+ core projects** covering systems programming, full-stack web, and machine learning.
- ▶ Mastery of **C, C++, Python**, networking (sockets, IRC), concurrency, and container orchestration.
- ▶ Cultivated soft skills through daily peer evaluations, group debugging, and intensive code reviews.

SELECTED PROJECTS

LUXOME (AGC – UM6P)	Django, React, Docker, Celery	ft_transcendence	Django, Socket.IO, OAuth2, PostgreSQL
Inception-of-Things	K3s, Ansible, Argo CD, GitOps	Inception	Docker, Nginx, MariaDB, TLS
Multilayer-Perceptron	Python, NumPy, Backpropagation	dslr (Multiclass Classification)	Python, NumPy, Gradient Descent
ft_linear_regression	Python, Gradient Descent, Cost Opt	Gomoku AI	Python, Minimax, Alpha-Beta Pruning

+ API gateway design, GraphQL development, and Redis caching for various industry clients.