

Marc Kahwaji

AI Developer and Full-Stack Engineer

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Objective

AI developer experienced in building production-grade microservices, multi-agent orchestration systems, and full-stack applications with Python, FastAPI, Docker, and React. Shipped 15+ AI services to production at HyperCycle, delivers freelance AI and web projects for clients, and an experienced technical trainer.

Professional Experience

Software Developer, HyperCycle

May 2025 – Present

- Designed, built, and deployed 15+ production AI microservices (AIMs) using Python, FastAPI, and Docker on decentralized HyperCycle infrastructure.
- Built an internal AI tool that moved from pilot to daily production use and is now part of the core workflow of approximately 80% of company staff.
- Architected multiple multi-agent orchestrated systems (6 to 7 coordinated agents each) using LangGraph, LangChain, CrewAI, and Groq, and built multi-tenant AI solutions where one deployment serves multiple organisations with isolated data and custom configurations.
- Implemented CI/CD pipelines (GitHub Actions + Aimifier) for automated deployment to Ubuntu nodes; hardened reliability across all services.

Freelance AI & Software Developer

April 2025 – Present

- Contract developer on Quoz, a B2B art programme management platform (React, TypeScript, Supabase): approval workflows, design versioning, and automated PDF generation.
- Designed and delivered technical training on AI (LLM architecture, multi-agent systems, prompt engineering, API integration) and Python to learners ranging from complete beginners to working developers.
- Developed full-stack websites (React, Tailwind CSS, Node.js) with integrated AI backends and real-time chat functionality.
- Scoped and delivered projects involving CRM integrations, WhatsApp automation bots, AI-powered telephony systems, and machine learning solutions for dataset analysis and predictive modeling.

Selected Projects

- Multi-Agent Research System (capstone):** 7 orchestrated agents with a monitoring dashboard (LangGraph, Groq, FastAPI, Docker).
- AI-Based Asset Classification for ISMS:** supervised ML pipeline that classifies people and devices from log data (CERT r4.2), benchmarked against a rule-based baseline and mapped to ISO/IEC 27001. Random Forest reached 97% accuracy against a 92% baseline. Python, Random Forest, ANN, SVM.
- Systematic Review of Dynamic AI-Based Android Malware Detection:** PRISMA-based review of 42 studies (screened from 1,724) covering dynamic analysis techniques, ML models, datasets, adversarial robustness, and reproducibility.

Education

BSc in Management Information Systems, American University of Science and Technology (AUST)

2021 – Jan 2027 (expected)

Final academic year. Relevant coursework: AI & Information Systems, Database Management, Statistics, Software Engineering.

Skills

AI & Machine Learning: Multi-Agent Orchestration, LangChain, LangGraph, CrewAI, RAG Systems, Prompt Engineering, LLM Integration (OpenAI, Groq, Ollama), NLP, Computer Vision, Predictive Modeling, FAISS

Programming & Backend: Python, JavaScript, TypeScript, C++, Java, Bash, FastAPI, Node.js, tRPC, Hono, Bun, REST, WebSockets, Webhooks

Frontend & Mobile: React, React Native, Expo, Next.js, Tailwind CSS, HTML/CSS

DevOps, Databases & Infrastructure: Docker, GitHub Actions (CI/CD), AWS EC2, Linux/Ubuntu, Vercel, Nginx, SQLite, PostgreSQL, Supabase, SQL

Integrations & Automation: Stripe API, WhatsApp Business API (Twilio), n8n, Zapier, SMTP, Prometheus

Digital Products & Capacity Building: Dashboards and data visualization, real-time monitoring, product scoping and user testing, documentation, training delivery

Certifications and Languages

Certifications: Cisco ITE A+ (DOT, Lebanon) | Communication in the 21st Century Workplace (University of California, Irvine) | IELTS C1 (British Council, Cambridge Assessment) | German B1 (Goethe-Institut)

Languages: Arabic (native) | English (fluent, IELTS C1) | French (fluent) | German (intermediate, B1). Three of the six official UN languages.

Volunteering and Community Work

- Volunteer Educator, Lebanon (2023 – 2024):** mentored Lebanese and Syrian refugee children on their rights, personal development, and access to education; reached more than 40 children over a five-month programme (May to September 2023), adapting sessions for mixed-age groups with different schooling backgrounds and language levels.
- Event Organiser & Sponsorship Lead, Lebanon (2023 – 2024):** organised celebration events for high-school graduates, managing logistics, budgeting, and delivery end to end; secured in-kind sponsorship (beverages, catering) and cash funding from local partners, covering the full cost so the events were free to attend.