

Adnan M. Kabbani

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EDUCATION

Lebanese American University (LAU), Beirut, Lebanon

B.S. in Computer Science ○ **Related Coursework:** Data Structures & Algorithms, Objects & Design, Computer Organization & Programming,

Combinatorics, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Statistics & Applications

EXPERIENCE

EZY.AI, AI-Powered SEO Analysis & Website Optimization Platform (Solo Development), Project Based

- Architected a full-stack SaaS (React 18 + TypeScript, Node.js/Express, PostgreSQL/Supabase, Redis) with CI/CD across Vercel (FE), Railway (BE), and Supabase (DB).
- Built a microservices indexing pipeline (web scraper/Indexer on Railway) with Redis queues for high-throughput background jobs and graceful fallbacks to Supabase.
- Shipped an AI analysis engine integrating GPT and Perplexity; optimized end-to-end latency from 56s → <40s via batching, caching, and prompt/IO tuning.
- Created EZY Connect script-injection system enabling real-time control of robots.txt, sitemaps, schema markup, and meta tags across WordPress, Wix, Shopify, Squarespace, and custom stacks.
- Implemented search-visibility scoring, dynamic query generation, Reddit mention & sentiment analytics, blog/content optimization, and Wikidata-powered structured-data enrichment.
- Enforced security and compliance: Supabase Row Level Security, input validation, XSS/SQLi protection, JWT auth, GDPR-aligned data minimization, and at-rest/in-transit encryption.
- Performance & scale: load-tested for 500+ concurrent users, Redis caching for hot paths, indexed SQL with optimized queries, and comprehensive logging/alerts.

Tech: React 18, TypeScript, Node.js, Express, PostgreSQL, Supabase (RLS/JWT), Redis (queues/cache), OpenAI GPT, Perplexity API, Railway, Vercel, Tailwind, shadcn/ui, Chart.js/Plotly/Recharts, Docker, CI/CD.

Full-Stack AI Trading Assistant Krypteia, Project Based

- Designed a production-ready AI trading assistant with FastAPI (async/await), PostgreSQL/SQLAlchemy, Redis, Celery, Docker, and Alembic; microservices-ready architecture with clean separation of concerns.
- Built a 5-dimensional behavioral scoring engine (Risk Tolerance, Emotional Stability, Strategy Consistency, Market Reactivity, Learning Progression) with ML-enhanced drift detection and real-time guardrails/interventions.
- Integrated OpenAI GPT agentic tools; context-aware chat adapts persona to a trader's behavioral state; comprehensive tool ecosystem for strategy optimization, risk assessment, and portfolio insights.
- Engineered scalable database layer: 15+ interconnected tables, optimized indexing, async operations with connection pooling; robust models for users, trading history, behavioral analysis, and chat sessions.
- Implemented real-time processing & monitoring: Celery-based background workers for heavy computations, Redis caching for hot paths, drift monitoring with alerts, health checks and metrics endpoints.
- Delivered advanced analytics & visualization: interactive dashboards (Chart.js) for behavioral trends, performance and risk; behavioral tags for pattern recognition; time-based strategy layering analysis.
- Hardened reliability & security: rate limiting, CORS, input sanitization, comprehensive logging/monitoring; 90%+ test coverage (pytest) across unit, integration, and API layers; Swagger/OpenAPI documentation.

Tech: FastAPI (async), PostgreSQL, SQLAlchemy, Redis, Celery, Alembic, Docker, OpenAI GPT-4, scikit-learn, Chart.js, pytest, Swagger/OpenAPI, JWT.

xCell-On, Dubai, United Arab Emirates*Feb 2025 – May 2025***Machine Learning Engineer and Office Excel Add-In Developer**

- Designed and developed an Excel add-in using the Office JavaScript API, automating complex spreadsheet workflows and enhancing data manipulation capabilities.
- Built robust error handling and logging mechanisms, ensuring high reliability and easier troubleshooting across diverse datasets.
- Integrated dynamic script generation via the OpenAI API and leveraged large language models for natural language processing, enabling on-demand data manipulation and analysis within Excel.
- Designed and implemented Full Agent flow including RAG and tool calling.
- Maintained and hosted full stack app on AWS using Lambdas, Code pipelines, Cognito, and many AWS tools.

Vault, Dubai, United Arab Emirates*November 2024 – Feb 2025***Full Stack Engineer**

- Developed and maintained dynamic web applications by integrating robust front-end interfaces with scalable backend services.
- Designed and implemented RESTful APIs, ensuring efficient data exchange and seamless integration with third-party services.
- Optimized application performance and improved user experience through responsive design, code refactoring, and continuous performance monitoring.

BLOM BANK s.a.l., Beirut, Lebanon*June 2024 – August 2024***Backend Developer**

- Designed and maintained secure backend services and APIs.
- Collaborated with front-end developers to integrate user-facing elements with server-side logic.
- Implemented authentication and authorization mechanisms.
- Created fully automated smart cv-parser for HR purposes
- Utilized Spring Boot Java for backend development and Docker for containerization and deployment.

Lebanese American University, Beirut, Lebanon**Computer Center Supervisor***September 2023 – June 2024*

- Installed and configured software applications and operating systems.
- Supported network connectivity and resolved connectivity issues.
- Participated in IT projects, including system upgrades and network maintenance.

Additional Experience & Capabilities

- Experienced in building large-scale data systems including container tracking platforms and high-volume web scrapers capable of processing thousands of data batches efficiently. Proficient in designing distributed scraping pipelines, implementing rate-limited request handling, and developing resilient ETL workflows optimized for reliability and scale.

ACTIVITIES AND LEADERSHIP

LAU Computer Science Club Member, *Helped Organize University Events done by our club. Teaching Assistant for Object Oriented Programing and Objects and Data Abstractions.*

SKILLS

Programming: React.js, Next.js, Node.js, Python, Java, C#

Tools: AWS, Git, Gitlab, Terraform, TensorFlow, Docker, Visual Studio, Firebase, Slack, Linear, PostgreSQL