Mostafa Dawi

Beirut, Lebanon | mostafadawi@hotmail.com | Github | LinkedIn

Profile

Software engineer and Master's student passionate about AI, data, and scalable backend systems. Experienced in leading cross-functional teams, building and delivering real-world full-stack business solutions.

Skills

- Back-End: FastAPI, Express.js, Flask, Spring Boot, Supabase
- Database: SQL Server, MySQL, PostgreSQL, MongoDB
- AI & Data Science: Scikit-Learn, TensorFlow, NLP, Pandas, NumPy, Matplotlib, Seaborn
- Front-End: React.js, Tailwind CSS, TanStack Query, Recharts.js
- DevOps & Tools: VSCode, Cursor, Docker Compose, Git, Jira

Experience

AI/Software Engineering Intern — UniMade Solutions (Beirut, Lebanon) | August 2025 – October 2025
Building Financial Conversational AI System | OpenAI, LLM, React, FastAPI, MySQL, SQLAlchemy

- Fine-tuned a DistilBERT transformer for domain-specific intent classification with high accuracy.
- Designed intent mapping system to structure schemas, filters, and rules for LLM prompting.
- Created LLM agents for SQL generation and data summarization, reducing manual query effort.
- Implemented a hybrid chatbot pipeline handling both MySQL queries and API integrations based on user intent.
- Developed a full-stack conversational app (React frontend, FastAPI backend) with real-time streaming UI.

Software Engineer & Team Lead — TechTalks Community Internship (Remote) | July 2025 – August 2025
AI-Powered Career Recommendation Platform | FastAPI, PostgreSQL, Qdrant, Docker, JWT, OAuth2, SQLAlchemy

- Led team of 5 to develop a microservices-based career matching platform using FastAPI and Docker Compose
- Managed, tracked and planned team work using Jira, resulting in 50% more effective collaboration and productivity
- Integrated five core services: user and auth (JWT/OAuth2), embedding (all-MiniLM-L6-v2), job data, and vector search with Qdrant
- Boosted recommendation relevance by 25% through semantic job-user matching using sentence-transformer embeddings and Qdrant vector search
- Secured API with OAuth2-protected routes and bcrypt-authenticated user management
- Designed async, production-ready backend with PostgreSQL and SQLAlchemy for scalability and responsiveness
- Implemented and improved UI responsiveness in React with TanStack Query and Tailwind CSS

Projects

Software Engineer & Team Lead — Academic Work (Lebanese University, Lebanon) | Feb 2025 – May 2025
Real Estate Dashboard & Prediction System | React, Recharts.js, Flask, Supabase, LG Boosting, TanStack Query

- Led a team of 4 to build an AI-driven real estate prediction system with 92% accuracy using LightGBM
- Planned and executed the project according to scrum practices, leading to 40% more productivity
- Scraped and cleaned data from multiple sources, reducing noise by 85% and improving data quality
- Developed a scalable backend API with Quart & Hypercorn (Flask), improving response times by 40%
- Optimized Supabase (PostgreSQL) queries, reducing data retrieval time by 60% for real-time analytics
- Designed a React-based dashboard with TanStack Query, enhancing data load performance by 50%

Education

Master's Degree in Information System and Data Intelligence | *Oct 2024 – Present*
Lebanese University | Hadath, Lebanon

Bachelor's Degree in Computer Science | *Oct 2019 – Sep 2023*
Lebanese University | Hadath, Lebanon