

MohamadBaker YEHYA

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Summary

Full Stack Developer specializing in building scalable web and mobile applications integrated with AI and machine learning. Experienced in developing end-to-end systems combining modern frontend frameworks, robust backend architectures, and intelligent data-driven features including prediction models and retrieval-augmented generation (RAG).

Projects

AI-Enhanced POS & Inventory Management System

Tech Stack: React, TypeScript, Node.js, Express, Prisma, PostgreSQL, AI (Groq / Ollama 70B)

- Developed a **full-featured POS system** with real-time sales processing, inventory tracking, and cost management for retail operations.
- Implemented **role-based access control** (Admin, Cashier, Manager) with secure authentication and permission handling.
- Designed a **dual-currency system (USD/LBP)** with integrated VAT/TVA calculations for accurate financial transactions.
- Built advanced modules including **payroll management**, stock control, and multi-vendor support with detailed sales analytics.
- Integrated hardware support for **barcode scanners and receipt printers**, enabling seamless in-store checkout experience.
- Integrated an **AI-powered inventory agent (Groq + Ollama 70B)** that analyzes transactions and stock levels to recommend restocking, detect trends, and generate intelligent business insights.

AI-Powered Hybrid Resale Platform (Final Year Project)

Tech Stack: React, TypeScript, Node.js, Express, Prisma, PostgreSQL, MobileNetV2, Linear Regression

- Developed a **hybrid resale system** integrating a React Native mobile app, React admin dashboard, and physical store workflow.
- Implemented **AI-based product category classification and price prediction** using TensorFlow and ONNX.
- Built a **Node.js (TypeScript) backend** with PostgreSQL for secure, scalable data management.
- Enabled item tracking, package management, delivery requests, and sales monitoring.

PDF-RAG-FastAPI – Retrieval-Augmented Generation (RAG) Project

Tech Stack: HTML, CSS, JS, Python, Ollama, FastAPI

- Used **SentenceTransformers** to generate embeddings and FAISS for semantic search over PDF documents.
- Integrated **Ollama LLM** locally to provide context-aware question answering.
- Developed a **FastAPI backend** to serve the Q&A system efficiently.
- Developed a lightweight interactive interface for real-time querying.

Education

Lebanese International University
Bachelor of Science in Computer Science

Beirut
2022-Present

Skills

Languages: Python, Java, TypeScript, Dart, SQL, PHP

Backend: Node.js, FastAPI, REST APIs, Authentication & Authorization

Frontend & Mobile: React, React Native, HTML, CSS

AI & Machine Learning: TensorFlow, PyTorch, Scikit-learn, RAG, LLMs, SentenceTransformers, ONNX

Databases & Search: PostgreSQL, MySQL, SQLite, FAISS

Data & Tools: Matplotlib, Seaborn, Plotly, Git, GitHub, Linux, Jupyter, VS Code, Google Colab

Languages

English: Full professional proficiency | **Arabic:** Native | **French:** Intermediate