

Martin Wassim

Software Engineer | AI/ML Engineer | Founder

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SUMMARY

Computer Science student and software engineer with hands-on experience building full-stack, AI/ML, desktop, and enterprise applications. Founder of Systemize EG, delivering custom business software, CRM solutions, automation systems, and management tools. Experienced with Python, C#, Java, ASP.NET Web API, SQL Server, PyTorch, and TensorFlow, with additional depth in computer vision, deep learning, and software architecture.

SKILLS

Programming Languages: Python, C#, Java, VB.NET, JavaScript, TypeScript, SQL, HTML5, CSS3

Backend & Web: ASP.NET Web API, REST APIs, Flask, Next.js, React, Tailwind CSS, Supabase, Full-Stack Development

AI & Machine Learning: PyTorch, TensorFlow, Deep Learning, Computer Vision, YOLO Object Detection, CNNs, Vision Transformers (ViT), NLP, LLMs, Generative AI, RAG

Databases: SQL Server, MySQL, Relational Database Design

Desktop Development: VB.NET WinForms, Java Swing, Tkinter, MaterialSkin, Apache POI

Other: OOP, Requirements Gathering, Product Lifecycle Management

EXPERIENCE

Founder

Systemize EG, Egypt | 12/2025 – Present

- Designed and delivered a custom Daily Sales Management System (POS) with an Arabic-first UI, multi-payment support, and Excel reporting using Java Swing and Apache POI.
- Designed CRM solutions and smart automation systems for business clients.
- Developed websites and digital tools to help businesses work smarter and scale faster.
- Managed the full product lifecycle: requirements, development, delivery, and client support.

Software Development Intern

National Steel Fabrication (NSF) – Orascom Construction, Egypt | 08/2026 – 09/2026

- Built an enterprise IT request and workflow system using VB.NET WinForms and a responsive web dashboard.
- Developed a C# ASP.NET Web API integrated with SQL Server for request routing, status management, and audit tracking.
- Created a responsive management dashboard (JavaScript, HTML5, CSS3) for employee requests and ticket monitoring.
- Designed a normalized SQL Server database with transactional integrity and sequential ticket ID generation.
- Implemented requester workflows for personal and “On behalf of” submissions with dynamic manager lookup.

PROJECTS

Velora – Daily Mission Game

Technologies: Next.js 16, React 19, TypeScript, Tailwind CSS, Supabase (Auth, Postgres, Storage), Vercel

- Built a full-stack daily mission game with XP, coins, levels, streaks, achievements, daily login rewards, and a leaderboard.
- Developed an admin dashboard for user and role management, mission creation and assignment, submission review (approve/reject with bonus XP and coins), rewards, and activity logs.
- Enforced rewards server-side with server actions and Postgres security rules, so players cannot modify their own XP or coins.
- Implemented photo-proof uploads, automated 24-hour mission publishing via a Vercel cron job, and phone home-screen install (PWA).

AI Portfolio with Admin Panel

Technologies: Next.js 16, React 19, TypeScript, Tailwind CSS, Supabase (PostgreSQL, RLS), Gemini / OpenAI APIs, Zod, Vercel

- Built a full-stack developer portfolio platform with a private admin panel of 18 management modules (projects, skills, experience, certifications, theme, SEO, messages, activity log).
- Engineered an AI auto-fill engine that parses a PDF or text resume and generates a bio, project case studies, and a theme recommendation, using Gemini and OpenAI APIs with an offline heuristic fallback.
- Designed a dual-layer data store (Supabase PostgreSQL with Row-Level Security on 16 tables, plus a local JSON fallback) with Zod-validated APIs, honeypot spam protection, and IP rate limiting.
- Deployed the platform on Vercel.

QR-Based Delivery Queue Management System (Amazon Now – Al-Haram Hub)

Technologies: Next.js 16, TypeScript, Tailwind CSS, Supabase (PostgreSQL, Realtime, Auth), Web Audio API

- Built a mobile-first, Arabic RTL queue system where couriers join with a single QR scan (no sign-up), with live ticket pages, a staff operations dashboard, a public TV display, order history, and audit logs.
- Prevented duplicate queue numbers and race conditions using PostgreSQL row-level locks (FOR UPDATE, SKIP LOCKED) in stored procedures, plus idempotency keys for double-tap and retry protection.
- Implemented shift session controls and a 5-minute courier cooldown enforced on both client and server, with real-time updates through Supabase Realtime and audio and vibration alerts.
- Wrote 16 automated tests covering concurrency, idempotency, FIFO calling, and session workflows.

WasteNet – Waste Classification Neural Network

Technologies: Python, PyTorch, Flask, CNN, Vision Transformer

- Developed a deep learning system that classifies waste into six categories.
- Benchmarked baseline CNN, improved CNN, transfer learning, and Vision Transformer (ViT) architectures.
- Deployed the best model as a local inference server with an interactive web dashboard.

RAG-Powered Document Assistant

Technologies: Python, RAG, LLM, ChromaDB, Sentence Transformers, Ollama, FastAPI, Streamlit

- Built a Retrieval-Augmented Generation system for question answering over academic PDF documents.
- Implemented document extraction, chunking, semantic search, and vector storage with Sentence Transformers and ChromaDB.
- Integrated a local LLM via Ollama to generate grounded, citation-backed answers based only on retrieved content.
- Delivered a FastAPI backend and Streamlit chat interface with automated testing and Docker-based deployment support.

Enterprise IT Request & Dashboard System (NSF – Orascom Intern Project)

Technologies: C#, ASP.NET Web API, VB.NET, SQL Server, JavaScript

- Built an end-to-end enterprise ticketing platform with desktop and web interfaces.
- Developed REST APIs for ticket routing, status transitions, and creator audit tracking.
- Designed the SQL Server relational database and responsive web dashboard for monitoring and administration.

EDUCATION

Helwan National University

B.Sc. in Computer Science – Robotics and Software Engineering | 09/2023 – 09/2027

CERTIFICATIONS

- Applied AI Development Level 2 (120 hours) – Information Technology Institute (ITI)
- Artificial Intelligence (90 hours) – Information Technology Institute (ITI)
- HCIA-AI V4.0 Course – Huawei ICT Academy
- Fundamentals of Deep Learning – NVIDIA
- Getting Started with Deep Learning – NVIDIA
- Deep Learning in Python – DataCamp
- Natural Language Processing in Python – DataCamp
- Image Processing in Python – DataCamp
- Computer Vision & Intro to Deep Learning – Kaggle
- Python Essentials 1 – Cisco Networking Academy & Python Institute

LANGUAGES

Arabic (Native), English (Upper-Intermediate)