

MAHMOUD SAMIR ATIEH

AI Automation Engineer | AI Engineer

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PROFESSIONAL SUMMARY

AI Automation Engineer with hands-on experience building RAG systems, LLM-powered applications, AI agents, and workflow automations. Experienced in retrieval pipelines, OCR document processing, semantic and hybrid search, vector databases, API integrations, and production workflows with n8n. Skilled in Python, TypeScript, Node.js, PostgreSQL, Supabase, Docker, and cloud deployment. Focused on building reliable AI systems that connect models with real-world applications.

TECHNICAL SKILLS

AI & RAG: RAG, LLM Integration, AI Agents, Prompt Engineering, Semantic Search, Hybrid Search, Re-ranking, OCR, Embeddings, Vector Search, OpenAI API, Google Gemini API, Vertex AI

Automation & Integration: n8n, Workflow Automation, REST APIs, Webhooks, OAuth 2.0, JSON, API Integration

Programming: Python, TypeScript, JavaScript, SQL, C++

Backend & Databases: Node.js, PostgreSQL, Supabase, Pinecone

Cloud & DevOps: Docker, Git, GitHub, Linux (Ubuntu), Google Cloud Platform, Cloudflare, Vercel, Netlify, Hostinger VPS, DNS, SSL

PROFESSIONAL EXPERIENCE

AI Specialist & IT Support — Media Vision | Internship | Jun 2025 – Jan 2026

- Engineered a news chatbot using ChatGPT and a custom RAG pipeline to generate source-grounded responses from real news data.
- Designed and optimized system prompts for tone, factual accuracy, and structured output in automated news workflows.
- Built an image-generation workflow that automatically produces branded visual content from company templates.
- Maintained internal AI tools and provided IT support across the organization.

PROJECTS

Nexora — AI-Powered Educational RAG Platform

- Built an end-to-end RAG platform combining OCR, chunking, embeddings, hybrid retrieval, re-ranking, and grounded LLM generation.
- Implemented scanned-PDF processing with OCR and metadata-aware document ingestion, backed by a Supabase vector database.
- Designed retrieval workflows combining semantic and keyword search and re-ranking candidate chunks before generation.
- Implemented retrieval-grounded generation to reduce unsupported answers and keep responses tied to retrieved document context.

LYRA — Offline Smart Home Assistant | Graduation Project

- Architected an Alexa-like voice assistant running entirely offline using local AI models, eliminating cloud dependency for core voice interactions.
- Engineered the end-to-end voice pipeline, intent recognition, and hybrid NLP architecture combining rule-based and model-driven components.

n8n AI Workflow Automation

- Designed production-oriented automation workflows integrating multiple services and LLMs with error handling and memory optimization.
- Deployed and managed n8n on a VPS using Docker, including domain configuration, SSL certificates, and OAuth 2.0 authentication.

Tasharuk — Educational Platform | tasharuk.org

- Contributed to development and production deployment of an academy learning platform, including hosting infrastructure and deployment management.

Teknofest Robotics Competition

- Developed autonomous robotics software using Python and ROS2 for Turkey's national Teknofest technology competition.

EDUCATION

B.Sc. in Software Engineering — Istanbul Sabahattin Zaim University | 2026 | Istanbul, Turkey

LANGUAGES

