

Mounir Khalil

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Objective

AI-focused engineer with a BE and ongoing ME in Artificial Intelligence from AUB, experienced in architecting and orchestrating AI agent workflows using LangChain, n8n, Claude, and LLM APIs (OpenAI, Anthropic). Proven track record of shipping end-to-end software projects and building REST API integrations at scale. Seeking an Agentic Engineer role to design AI-powered systems that automate real business operations and deliver production-grade outcomes.

Experience

- Freelancing — AI Automation Engineer**, n8n, LangChain, Claude, Ollama, OpenAI API, Python, Supabase, Lovable Feb 2025–Present
- Architected and deployed multi-step AI agent workflows using n8n and LangChain to automate business processes for clients
 - Integrated LLM APIs (OpenAI, Anthropic/Claude) into production pipelines with structured prompt chains and context window management
 - Built full-stack web applications with AI-powered features, from requirement gathering to deployment
 - Designed feedback loops and quality validation processes to continuously improve AI agent output reliability
- General Directorate of General Security**, Computer Engineering Officer Feb 2025–Present
- Allied Engineering Group (AEG)**, C#, JavaScript, MS SQL, REST APIs Aug 2024–Feb 2025
- Software Developer — System Integrations and API Development
- Designed and implemented REST API integrations for Visa Alias Directory Service across 12 banks in Cyprus
 - Built Instant Credit Transfers API pipeline for a Cyprus-based financial institution, including error handling, validation, and monitoring
- Sword Group Lebanon**, Angular, Spring Boot (Java), MySQL Jun 2023–Aug 2023
- Internship — Full Stack Developer
- IDS Fintech, Beirut**, Angular Dec 2022–Jan 2023
- Internship — Front-end Developer
- American University of Beirut (AUB)**, C++ Dec 2022–Jan 2023
- Data Structures and Algorithms Tutor for 1st Year Students

Education

- American University of Beirut (AUB)** Sep 2024–Present
- ME in Electrical and Computer Engineering
- Major: Artificial Intelligence
- Thesis: Training Neural Networks on Encrypted Data (CKKS, Approximate Polynomials, Python)
- American University of Beirut (AUB)** Sep 2020–Jun 2024
- BE in Computer and Communications Engineering

Projects

- Automated Multi-Source News Report Generator**, n8n, Claude API, PostgreSQL, Docker, Python, docx-js Mar 2025–Present
- Designing and building an end-to-end automated pipeline that generates daily analytical reports by orchestrating AI agents through n8n workflows. The system fetches and cross-references open sources in multiple languages (English, Arabic, Farsi, Chinese), applies a structured multi-phase LLM analysis methodology for verification and bias detection, and produces a formatted Arabic .docx report. Built with Docker (n8n + PostgreSQL), Claude API for multi-step reasoning and prompt chaining, and persistent storage for execution logs. Goal: enabling informed awareness through systematic, multi-perspective media verification.
- Safe Access Monitoring System**, Python (Flask), Telegram Bots, PythonAnywhere Jan 2025–Mar 2025
- A security system that detects unauthorized access to a safe, captures the intruder's face with date and time, and notifies the owner in real-time. The owner can remotely approve or deny access, controlling whether the individual can proceed with code entry.
- Automated Content-Creation App**, Java, OpenAI LLM API, Google Cloud Text-to-Speech, FFmpeg Jul 2024–Apr 2025
- A Java-based application that fetches the latest technology news, generates scripts using OpenAI LLM API, and creates short videos with automated voice-overs using Google Cloud Text-to-Speech and FFmpeg. End-to-end automated pipeline from data ingestion to video production.
- Telegram Bot for Better Sleeping**, Python (Flask), MySQL, Telegram Bots, PythonAnywhere Apr 2024–Jul 2024
- Designed and shipped a team-based, competition-paced sleep tracking bot enabling users to log sleep data, automatically compute daily leaderboards, and track team scores. Deployed on PythonAnywhere with persistent MySQL storage and scheduled jobs.
- Landmark Detection in Satellite Imagery**, Python, PyTorch, YOLOv8 Mar 2024–Apr 2024
- Developed a machine learning model using the large xView dataset for satellite imagery. The model, based on YOLOv8 Large, is trained to identify landmarks such as buildings, vehicles, and roadways for urban planning and disaster response applications.
- "K.A.H.A." — Smart Energy Management System (Final Year Project)**, Python, Flutter, MongoDB, Raspberry Pi, Machine Learning Sep 2023–Apr 2024
- A smart energy management system with a mobile app and a Raspberry Pi that uses machine learning to learn and predict a household's electricity consumption to help them make efficient consumption decisions. Shipped end-to-end from hardware to mobile app.

Technical Skills

AI & Agent Frameworks: LangChain, n8n, Claude Code, Claude API, OpenAI API, Ollama, Azure AI Services, PyTorch, TensorFlow, Scikit-learn
Languages: Python, JavaScript, TypeScript, Java, C#, C++, HTML, CSS
Web & Backend: Flask, Node.js, React, Angular, Spring Boot, tRPC, REST APIs
Databases: PostgreSQL, MySQL, MS SQL, MongoDB, SQLite, Supabase
DevOps & Tools: Git, Docker, Docker Compose, PythonAnywhere, AWS
Languages (Spoken): English (Fluent), French (Fluent), Arabic (Fluent)

Interests

Technical: Agentic AI Development, AI Agent Orchestration, Workflow Automation, LLM Engineering, System Integrations, Full-Stack Development

Sports: Basketball, Table Tennis

Awards, Certifications, and Extracurricular Activities

Volunteering at the Amazon Industry Program 3.0 at AUB — Machine Learning Track,
Volunteering — Assisting displaced individuals affected by the war in school-based shelters,
Mentoring four students in the Mentorship Program at AUB,
Placed on AUB Faculty of Engineering Dean's Honor List for Fall 2022,
Awarded 2nd Place in Build It Weekend 4.0 — IEEE AUB Student Branch,
Member At Large — IEEE AUB Student Branch,

May 2024
Oct 2024
Sep 2023–Dec 2023
Mar 2023
Apr 2022
Sep 2020–Jun 2021