

Ramzy Rafla

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Education

EPFL

Sept 2023 – Present

BSc in Electrical and Electronic Engineering (GPA: 5.25/6)

- **Relevant Courses:** Analysis I–IV, Numerical Analysis, Probability & Statistics, Data Science , Object-Oriented Programming, Micro-EMBEDDED Systems, Signal Processing.
- **Relevant Roles:** TA for Analysis I & III, TA for Intro to electricity.

Imperial College London

Summer 2022

Summer Course

- **About:** Physics and Math course where we used Python's libraries to simulate various phenomena.

Experience

Corporate Trust Index (CTI)

Lausanne, Switzerland

Sept 2025 – Present

Extracurricular Project — EPFL

- Co-founding a startup developing a system to predict corporate fraud using weak signals derived from public data sources.
- Accepted into EPFL's Startup Launchpad program and awarded 10,000 CHF in Microsoft Azure credits to support infrastructure and deployment.
- Designed the data-cleaning and structuring process to feed a machine learning model inspired by a recent academic paper on fraud detection.

Suite Assist

Lausanne, Switzerland

Oct 2025 – Present

Extracurricular Project — EHL Innovation Hub

- Co-founding team developing an AI-driven WhatsApp assistant that allows hotels to configure their own digital concierge for guest support and operational efficiency.
- Project initiated after winning first place at the EHL Innovation Sprint Hackathon, leading to selection in the EHL Innovation Hub's pre-acceleration program.
- Building a backend system for customizable chatbot configuration, analytics dashboards, and scalable multi-hotel deployment.

Project Manager & Human Resources Committee Member

Lausanne, Switzerland

Feb 2025 – Present

Junior Entreprise EPFL

- Overseeing 5 IT and machine-learning projects worth over CHF 40 000 in revenue.
- Recruit and onboard new Project Managers through structured screening and a weekly training program; maintain up to date internal playbooks and tool guides.

Summer Engineering Internship

Cairo, Egypt

July 2024 - August 2024

Microsoft

- Developed a carpooling website for Microsoft Egypt employees to reduce carbon emissions.
- Created the front-end of the website using HTML and TypeScript.
- Helped develop the API in C# to interact with the website and the database.

Projects

Deep Learning Image Classifier

- End to end CV pipeline for beverage brand classification: scraped $\approx 2\ 000$ images, transfer learned ResNet18 with augmentations, MPS accelerated training, modular loaders and checkpointing.
- **Tools Used:** Python, PyTorch, torchvision, PIL, Pandas, requests, DuckDuckGo Search, Apple Silicon MPS.

Infection Simulator

- Built a binary classifier to detect a virus from patient data.
- **Tools Used:** Python, Scikit-learn, Numpy, Matplotlib, Pandas

Marine Ecosystem Simulator

- Built a visual simulator of species population dynamics under constraints, with random algal growth and scavengers consuming algae.
- **Tools Used:** C++, Object-Oriented Programming, Gtmm (GUI library)

Nintendo DS Game Development (in progress)

- Currently developing a homebrew Nintendo DS game from scratch; learning embedded programming, memory mapping, and hardware-level graphics.
- **Tools Used:** C, devkitARM, libnds, Desmume emulator, Tiled map editor

FawzyChat

- Delivered a working voice assistant for transcription, translation, and email composition across English, Arabic, and Arabizi; defined a two step transcription pipeline with custom Arabizi normalization, and real time in browser recording.
- **Tools Used:** OpenRouter LLMs, FFmpeg, React, FastAPI, REST APIs.

Skills

- **Languages:** Arabic (Native), English (C2), French (C2), Spanish (A2)

- **Programming:** C++, Python, TypeScript

- **Frameworks/Libraries:** PyTorch, React, scikit-learn, Pandas, Numpy, FastAPI, Matplotlib, DuckDuckGo Search, Gtmm

- **Interests:** Applied AI, Hackathons, Mathematical Modeling, Music, Nutrition