TAREK SHEREEN DARWISH

Graduate Software Engineer

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Open to remote roles, or relocation with visa sponsorship

SUMMARY

Final-year B.Sc. Intelligent Systems Engineering student (expected 2027) with backend and mobile internships and a Rust systems project. Won the Youth Leaders Foundation (YLF) Hackathon 2026 and Leaders of Tomorrow, 2nd at Banha. Merged a librespot (Rust) fix. Seeking a graduate software role.

EDUCATION

B.Sc., Intelligent Systems Engineering, Helwan National University — *Helwan, Egypt · 2022 – 2027 (expected)*

TECHNICAL SKILLS

Languages: Python, TypeScript/JavaScript, Rust, C, Kotlin, Dart, SQL

Backend & Cloud: FastAPI, Node.js/Express, REST APIs, Supabase, Docker, GitHub Actions CI, pytest, Azure

Mobile & Web: Flutter, Android (Kotlin), React

ML: XGBoost, TensorFlow Lite, scikit-learn, SHAP

PROJECTS

ZeroClip: Windows Game Clipper · *Sole developer · pre-alpha · Rust, Direct3D 11, WASAPI*

- Built GPU screen capture feeding hardware H.264/HEVC encoders, with frames kept in VRAM.
- Implemented an allocation-free, GOP-aware DVR buffer and a fragmented MP4 writer with no re-encoding.

Healthica: Smart Band Health Monitor · *Winner, YLF Hackathon 2026 (team of 5) · 2nd place, Banha · Flutter, React, TFLite, ESP32*

- Built the Flutter app (BLE, Riverpod, Supabase), the React doctor dashboard, part of the ESP32 firmware and TFLite models.

Atlas: AI Learning Mentor · *1st place, Leaders of Tomorrow Hackathon · Flutter, FastAPI, Gemma 3*

- AI mentor that finds a learner's tech track, sets their level with a dynamic quiz and recommends next steps.

safi: Local Agentic LLM Backend · *Python, llama.cpp · in progress*

- Planner/executor LLM backend on llama.cpp: model probe (VRAM, speed, thermals), tool registry, CPU embedder, pytest tests.

EXPERIENCE

Generative AI Engineer (DEPI Generative AI Track), Digital Egypt Pioneers Initiative — *Cairo, Egypt (Hybrid) · Nov 2025 – Jul 2026*

- Built an explainable fraud-detection service: XGBoost on 310 features (test ROC AUC 0.97, precision 0.89, recall 0.74), served by FastAPI with pytest tests in GitHub Actions.

Backend & AI Engineer Intern, Aispeak — *Madrid, Spain (Remote) · Jul 2025 – Jan 2026*

- Built the backend pipeline that routes user messages to Azure and a LLaMA-70B model.

Backend Engineer Intern, Jiffy — *Remote · Aug 2025 – Dec 2025*

- Built the Node.js and TypeScript backend (Express, MySQL, Redis, Docker Compose) with JWT auth.

Instructor, Pixels Egypt Org. — *Helwan, Egypt · Oct 2023 – Oct 2024, Mar 2025 – Oct 2025*

- Taught ML, Computer Vision and Flutter to 15+ students; 95% satisfaction, 80% project completion.

Cross Platform Mobile Developer Intern, Link Development — *Maadi, Egypt · Jul 2025 – Aug 2025*

- Led interns building a Flutter e-commerce app (Clean Architecture, Riverpod, Firebase) with pull-request reviews.

Mobile App Developer (DEPI Mobile Track), Digital Egypt Pioneers Initiative — *Cairo, Egypt (Hybrid) · Oct 2024 – May 2025*

- Built native Android apps in Kotlin and Flutter apps in Dart.

OPEN SOURCE

- Merged: librespot (Rust), #1786, fixes Liked Songs updates sent as plain JSON being dropped as invalid base64.
- Open: Sonora (Rust), Spotify Connect, Jams, right-to-left text; MeasureIt_ARCH (Python), #309.

CERTIFICATIONS

AWS Cloud Practitioner · Machine Learning Specialization (Stanford) · Huawei HCIP-AI