Kosay Darwish
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EDUCATIONAL BACKGROUND

American University of Beirut

- BE in Computer and Communication Engineering | Minoring in Applied Mathematics **|GPA 3.98/4**
- HES-RSS Scholar
- Dean's Honor List for all semesters at AUB

Relevant Courses: Data Structures and Algorithms, Machine Learning, Data-Driven Modeling in Science and Eng'g, Design and Analysis of Algorithms, Database Management, Software Eng'g, Ethical Hacking, Network and Security, Neural Networks.

EXPERIENCE

Coding Coach-Teacher Assistant-AUB

- Assist in teaching Data Structures and Algorithm using C++ course
- Held weekly labs and Office Hours

IT assistant officer-AUB IT Dept

- Provided technical support, troubleshot hardware/software issues
- Assisted in maintaining IT systems to ensure smooth operations.

RESEARCH EXPERIENCE

MSFEA/ ECE Dept/ AUB- AI Research Intern

- Completed 2-months internship working on a project in AI in immunotherapy.

Research Assistant-AUB

- Worked on biodiversity conservation project-Saving Lebanese Biodiversity (SLB)- using ML and citizen science

TECHNICAL PROJECTS

Final Year Project

- Developed an agentic AI system for real-time symptom intake, triage and emergency detection, integrating medical history data for proactive intervention.

Misinformation Detection Using Neural Networks

- Developed a multimodal misinformation detection framework combining RoBERTa, speaker metadata, and GPT-4o-mini reasoning features.

Medical Scheduling Platform- Software Eng'g

- Built a web-based platform using **React, Express.js, and PostgreSQL** to manage doctor availability and patient appointments.
- Developed secure backend APIs and optimized database queries for reliable scheduling operations.

Earthquake Magnitude and Tsunami Risk Prediction

- Built machine learning models to predict earthquake magnitude and assess tsunami risk using large-scale seismic datasets.
- Integrated economic loss predictions based on seismic events to evaluate financial impacts.

Earthquake Aftershock Forecasting Project using DL

- Developed a ConvLSTM-based model for real-time earthquake aftershock counts forecasting using seismic data, achieving high accuracy in predicting aftershock occurrences

PlanTech- IoT

- Implementation of an ESP32-based automated irrigation system using ESP-IDF to optimize water usage through sensor-driven control.

Loan Management System

- Developed a database-driven loan management platform utilizing PostgreSQL views, triggers, and stored procedures to automate approvals and ensure data integrity.

Capture The Flag (CTF) Penetration Testing Project

- Conducted an end-to-end ethical hacking engagement, performing reconnaissance, vulnerability analysis, exploitation, and privilege escalation to obtain root access on a Linux target.

EXTRACURRICULAR ACTIVITIES

University

- Treasurer of the HES Club Cabinet &Arabic Students Society Cabinet
- Member of IEEE

Volunteering

- MMKN Public School Support System: Team Supervisor
- Community Service project under the supervision of CCE AUB

Certificates and Workshops

- NASA SpaceApps Challenge
- Certificate Program: "Humanitarian Aid: Global Perspectives and Local Practices".
- E-Portfolio, Arduino, Startup Accelerators Workshops.

SKILLS

Technical Skills: Python(pandas, OpenCV, PyTorch, ML libraries), C++, Verilog, Assembly, MATLAB, SQL, Cybersecurity(Linux), Flutter.
Languages: Arabic(Native), Excellent proficiency in English.