Maghi Haidar

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EDUCATION

American University of Beirut, (AUB)

Beirut, Lebanon

Bachelor of Engineering in Computer and Communications Engineering

09/2021 - 05/2025

• Recipient of the Women Leaders in Engineering Scholarship and LIFE Lebanon Scholarship

WORK EXPERIENCE

Technical University of Munich (TUM)

Munich, Germany

Research and Development Intern, Chair of Material Sciences

06/2024 - 08/2024

• Conducted comprehensive literature research on Proton Exchange Membrane (PEM) Fuel Cells

• Developed, optimized and debugged a Python communications script to automate electrochemical testing processes

Electrical and Computer Engineering Department

Beirut, Lebanon

Teaching Assistant, "EECE 321: Computer Organization Course"

01/2024 - 05/2024

• Assisted in grading assembly programming assignments and Verilog projects for the students

Research Assistant, "AI-Enabled Detection/Aggressiveness Prediction of Prostate Cancer Lesions"

09/2023 - 12/2023

• Extracted, compiled and organized patients' data from the clinical applications at the AUB Medical Center Research Assistant Intern, "Smart Virtual Sensors"

06/2023 – 08/2023

• Reviewed and edited the research paper prior to Institutional Review Board (IRB) submission

• Collaborated to the execution of the research experiments in the laboratory

Teaching Assistant, "Pipeline Initiative"

09/2022 - 05/2023

 Worked on part of the software development of the mentorship program that sends automatic emails to connect between mentors and mentees

• Assumed the role of content editor for the Pipeline Initiative webpage

ACADEMIC PROJECTS

American University of Beirut

Beirut, Lebanon

Quantum Enhanced Machine Learning for Optimized Solar Energy Utilization

Final Year Project | 05/2025

• Developed a real-time optimization system to maximize solar energy utilization by addressing mismatches between production and consumption

 Built a full-stack solution integrating quantum and classical machine learning models (LSTM & QLSTM), Python based optimization, and IoT technologies for real-time control

Employee Recommendation System

12/2024

• Developed a recommendation system using Django and implemented machine learning algorithms to generate personalized recommendations based on user input and dataset insights

• Deployed the application using Azure Web Services

Secure E-commerce Web Application

11/2024

• Developed a secure e-commerce web application using Python Flask, focusing on robust programming, secure coding practices, and defense against common vulnerabilities.

Real-Time Parking Spot Detection using YOLOv8

05/202

• Built a machine learning model which utilizes YOLOv8 to detect parking spaces labeling them as empty or occupied Polynomial Arithmetic Cryptography 11/2023

• Developed a GUI calculator that performs polynomial operations in Galois Field(2m) using Python, CSS, and HTML

LEADERSHIP AND VOLUNTEERING ACTIVITIES

 $Mentor\ in\ the\ Google\ Developer\ Groups\ (GDG)\ on\ Campus\ program$

09/2024 - Present

• Offered guidance and advice to the GDG on Campus new organizers and active chapters

• Shared resources and encouraged participation in creating events to foster community engagement

Secretary of International Association for the Exchange of Students for Technical Experience (IAESTE)

09/2024 - Present

Coordinated with the Office of Students Affairs to obtain approvals for events and social media content

• Managed the communication of incoming internship offers to the club members

Head of Google Developer Student Club (GDSC), AUB

07/2023 - 09/2024

• Organized and led Tech workshops, seminars, and hackathons

• Networked and collaborated with other student leaders, professional community organizers, industry experts, & Google SDG Coordinator and Founder of the SDG Student Hub, AUB 08/2022 - Present

• Collaborated with several local NGOs to strategize and implement effective food distribution programs

• Implemented several clean up campaigns in collaboration with local environmental NGOs

Member of the Lebanese Red Cross (LRC) Club, AUB

10/2021 - Present

• Spearheaded awareness sessions for beneficiaries about Sustainable Consumption and Production as an SCP Facilitator in the LRC Youth Sector

SKILLS & CERTIFICATIONS

Skills: MatLab, LabVIEW, PSPICE, Mobile Development, Clanguage, Python, C++, Java, VHDL, Verilog, JavaScript, HTML, CSS, Flask, SQL, MySQL, GitHub, Microsoft Office (Word, Excel, PowerPoint)

Certifications and Awards: "Biomedical Research" and "Responsible Conduct of Research for Engineers" certifications from CITI Program, ranked 3rd place in the "Mentorship Industry Program" in collaboration with Amazon and IEEE, "Mobile Application Development Training" with DOT Lebanon

Languages: English (Fluent), Arabic (Native), French (Basic)