

Hussein Yehia

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EDUCATION

American University of Beirut (AUB)

Beirut, Lebanon

B.E. in Computer and Communications Engineering

Sept. 2023 - Jun. 2027 (Expected)

- Named to the Dean's Honors List, GPA: 3.76/4.0
- Track: Artificial Intelligence and Machine Learning
- Minor in Applied Mathematics

Beirut Baptist School (BBS)

Beirut, Lebanon

Lebanese Baccalaureate - General Sciences

Sept. 2008 - June, 2023

- Achieved a school-wide academic average of 90/100 and graduated with high distinction
- Ranked within the top 10 in Beirut in the Lebanese Baccalaureate examination

EXPERIENCE

Undergraduate Research Assistant | Prof. Ibrahim Issa, AUB

Feb. 2026 – Present

- Investigating estimation theory with noisy observations: analyzing conditions for feasible estimation of distributions and properties like entropy from n i.i.d. samples passed through a channel W .
- Exploring optimal estimators and corresponding error rates for the noisy estimation problem.

IT Support Assistant | AUB IT Department

Feb. 2026 – Present

- Provide technical assistance to students, faculty, and staff with hardware, software, and network issues; perform system diagnostics and configuration.

Teaching Assistant | AUB

Jan. 2024 – May 2025

- Led weekly lab sessions and conducted office hours for Introduction to Programming (Python), assisting with assignments, exam preparation, and core programming concepts.

PROJECTS

AUB Boutique | Python, PyQt5, Socket Programming, SQLite

Aug. 2024 – Nov. 2024

- Developed a desktop marketplace featuring product browsing, user authentication, custom socket communication for purchases, and SQL-based search/ratings.
- Integrated Gemini API for an in-app AI chatbot and implemented byte-stream image viewing for enhanced UX.

QuickSign | Python, Flask, React, AWS (Cognito, S3, DynamoDB), TensorFlow

May 2025 – Sept. 2025

- Collaborated in a 5-person team to build an Arabic Sign Language translation app using animated avatars.
- Developed backend infrastructure with AWS services and integrated the AI gesture-recognition model for ArSL-to-text and text-to-avatar generation.

AES Modes Visualizer | Python, Flask, HTML5, CSS3, JavaScript

Oct. 2025 – Dec. 2025

- Developed an interactive web app visualizing five AES encryption modes with step-by-step transformations, key expansion details, and support for 128/192/256-bit keys.

Solar Flare Prediction System | Python, Scikit-learn, XGBoost, TensorFlow

Jan. 2025 – May 2025

- Collaborated in a 3-person team to develop ML models predicting solar flare intensity using NASA's SDO/HMI dataset, addressing severe class imbalance with SMOTE and class weighting to improve recall of rare M/X-class flares.

EXTRACURRICULAR ACTIVITIES

Amazon Industry Program 4.0

Sept. 2025 – Dec. 2025

- Earned 3rd place out of 16 teams with QuickSign, an accessible sign language translation tool; built business model and market strategy to illustrate commercial viability.
- Received mentorship and participated in pitching and teamwork.

TECHNICAL SKILLS

Programming Languages: Python, C/C++, Java, SQL, PHP, Assembly

Developer Tools: Git, MySQL, VSCode, Linux, Spyder, Eclipse

Frameworks: Flask, React, FastAPI

Languages: English (Fluent), Arabic (Native), German (Elementary), French (Basic Comprehension)