

Sacha Y. Hannoun

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EDUCATION

American University of Beirut (AUB)

Beirut, Lebanon

BEng in Computer and Communications Engineering

August 2023 – May 2027

- **GPA:** 3.3/4.00
- **Activities and Societies:** IEEE AUB student branch, AUB Consulting Club
- **Relevant Focus:** Optimization, Machine Learning, Networking Systems, Secure Communications

Collège Saint Joseph Antoura

Antoura, Lebanon

French Baccalaureate, Specialization in Math, Physics & Chem

September 2009 – June 2023

- **Awards & Achievements:** Diploma with Distinction

RESEARCH EXPERIENCE

Ethical Wireless Communications and Sensing

AUB, Lebanon

Research Assistant

Aug 2025 – Present

- Modeling wireless resource allocation under biological exposure constraints using convex optimization.
- Implementing simulations in MATLAB and analyzing performance under dynamic channel conditions.
- Exploring AI-driven optimization techniques to enhance adaptive decision-making and system performance.

PROJECTS

Cryptography and Networking

AUB, Lebanon

ElGamal Encryption

December 2025

- Implemented ElGamal cryptosystem in Python using large-prime modular arithmetic.
- Simulated encrypted data transmission and measured latency across key sizes.
- Balanced security strength against computational cost.

Software Systems and Networking

AUB, Lebanon

Multiplayer Racing Game

December 2025

- Developed a real-time multiplayer system using Python and Pygame.
- Implemented socket-based communications for synchronized state management.
- Designed game logic including collision detection and adaptive AI behavior.

Artificial Intelligence and Systems

AUB, Lebanon

On-Premise Edge LLM for Secure Corporate Intelligence

January 2026 – Present

- Deploying a private LLM on a GPU-enabled system to enable secure, on-premise AI usage.
- Building document analysis, code generation, and automation workflows while preserving data privacy.
- Evaluating performance, latency, and security trade-offs to support enterprise AI adoption.

PROFESSIONAL EXPERIENCE

Hannoun Computer Company (HCC)

Baabda, Lebanon

Sales Assistant

July – Aug 2023

- Advised customers on hardware and software solutions based on performance needs.
- Configured and tested PC systems while supporting troubleshooting and inventory coordination.

VOLUNTEERING

Collège Saint Joseph Antoura

Antoura, Lebanon

Tutor

January-May 2023

- Provided academic support and mentoring in mathematics, physics and IT.

SKILLS

Programming & Tools: Python, C++, SQL, MATLAB, Linux, Git, REST APIs

Technical Areas: Networking Systems, Socket programming, Data analysis, Data Privacy, Machine Learning, Optimization