

Mohamad Al Aalami

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EDUCATION

American University of Beirut

B.S. in Computer Science

Beirut, Lebanon

Expected Graduation, May 2027

- **GPA:** 3.98/4.00, *Dean's List*
- **Related Coursework:** Software Engineering – Operating Systems – System Programming – Data Structures & Algorithms – Object-Oriented Programming – Computing in Java

Relevant Coursework & Certifications

Back End Engineer career path – codecademy

December 2025

- Built Node.js/Express backends with structured APIs and SQL/PostgreSQL storage, focusing on correctness, input validation, and understanding system failure modes rather than feature breadth.

CS50X: Introduction to Computer Science – Harvard University (edX)

May 2025 – July 2025

- Completed full-stack projects across **C, Python, SQL, and HTML/CSS**. Engineered interactive web apps.

CS50P: Introduction to Programming with Python – Harvard (edX)

May 2025

- Built **Python** programs using core programming concepts and debugged complex logic across 10+ problem sets.
- Built a final project covering all material took in the course

PROJECTS

Applied Software Project — TENN.ai

Technical Contributor

May 2025 – June 2025

- Worked on building a pipeline to extract and structure Arabic text from PDF documents, including handling inconsistent formats and OCR-based extraction.
- Focused on reliability, error handling, and making unstructured documents usable for downstream analysis.

Graph-Structured RL for Urban Traffic Signal Control

Team Lead

Jan 2026 – May 2026

- Built a graph-based reinforcement learning controller for urban traffic signals using shared GNN parameters to handle variable road-network topologies and intersection sizes.
- Implemented a GAT + DQN architecture with pressure-based rewards, typed graph edges, phase-action masking, and baseline comparison against Fixed-Time, MaxPressure, and Independent DQN controllers.
- Developed deployment-oriented components including a FastAPI/Docker serving layer, watchdog fallback logic, decision logging, and evaluation metrics for waiting time, throughput, queue length, and signal stability.

AUB Events Platform

Backend Developer

Aug 2025 – November 2025

- Developed a backend for a university events platform with RESTful APIs, input validation, and structured data models.
- Emphasized maintainability, security, trade-offs, and avoiding premature optimization.

ACTIVITIES AND LEADERSHIP

American University of Beirut

Course Tutor for CMPS 202(Data Structures)

Beirut, Lebanon

Jan 2025 – May 2025

- Provided targeted exam prep for CMPS 202 students, boosting performance by over 30% for several students; majority scored in the A to A– range.

SKILLS

Programming: Java, Python, HTML/CSS, JS, SQL

Tools: Django, Git, VS Code

Soft: : Problem-solving, team-work, adaptability, quick learning