

Ziad Abillama

Computer Engineering and Economics dual degree student at the American University of Beirut with hands-on experience in software development, embedded systems, and robotics. Built projects such as a client-server course registration system and an autonomous robot navigation in RISC-V assembly. Skilled in Python, C++, MATLAB, Verilog HDL and simulation tools like PSpice and Cisco Packet Tracer. Strong problem solving, teamwork, and communication skills. Seeking opportunities to apply these skills in internships and research.

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📍 Beit Mery, Lebanon

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EDUCATION

Brummana High School

Lebanese Baccalaureate

Oct 2008 - Jun 2023

American University of Beirut

First Major: Bachelor of Engineering - BE, Computer Engineering

Sep 2023 - Aug 2027

Second Major: Bachelor of Science - BS, Economics

PROJECTS

AUB Registrar System [🔗](#)

Mar 2025 - Apr 2025

- Built a course registration system with secure **role-based access** and support for **concurrent users**.
- Developed a **backend API** using **Python**, **SQLite**, and **JSON** messaging with **socket programming** for client-server communication.
- Designed an interactive **GUI** with **Tkinter** and implemented **threading** and **database locking** to ensure data consistency and real-time performance.

Autonomous Robot Navigation [🔗](#)

Apr 2025 - May 2025

- Programmed an autonomous robot in **RISC-V assembly** to process **sensor inputs** and control **motor actions** for **real-time navigation**.
- Implemented **conditional branching** and **register-level programming** for decision-making and **obstacle avoidance**.
- Simulated and verified control behavior using the **RARS simulator** to ensure reliable execution under dynamic conditions.

Digital Systems Design (Combinational and Sequential Logic) [🔗](#)

Jul 2024 - Aug 2024

- Developed two hardware modules in **Verilog**: and **8-bit Arithmetic Logic Unit (ALU)** and a **sensor-driven traffic light controller**, demonstrating proficiency in both **combinational logic** and **sequential logic** design.
- Implemented low-level **arithmetic**, **logical**, **bit-shifting**, and **comparison** operations without built-in operators, and designed a **finite-state machine (FSM)** with timing counters and event-driven state transitions.
- Created comprehensive **testbenches** and performed **simulation-based verification** to ensure correct functionality, timing behavior, and signal transitions under varied input conditions.

SKILLS

- **Programming:** Python, C++, Risc-V Assembly, Matlab, Verilog HDL
- **Software Development and Networking:** SQLite, Socket Programming, TCP/IP, JSON
- **Systems & Tools:** Git, Tkinter (GUI), Jira, Figma, Microsoft Office Package (Word, Excel, Powerpoint, Access)
- **Embedded & Robotics:** Sensor Integration, RARS Simulator, Motor Control Algorithms, Event-Driven Systems
- **Simulation & Analysis:** PSpice, Cisco Packet Tracer
- **Languages:** English (fluent), Arabic (native), French (fluent)

CERTIFICATES

Honorable Mention - QMUNC (Model United Nations)

Recognized for strong debate, negotiation, and public speaking skills