

CV

Fatima Arzouni

Beirut, Lebanon | fatimaarzouni2003@gmail.com | +961 70064048 | github.com/fatima-arzouni

Profile

Computer Engineering student with hands-on experience in software development, machine learning, embedded systems, and cybersecurity. Experienced in developing full-stack web applications, implementing AI-driven robotics solutions, and integrating software with physical systems. Strong analytical and problem-solving skills with an interest in digital transformation, artificial intelligence, data-driven decision making, and technology-enabled public services. Seeking to contribute technical expertise to initiatives that drive innovation and national digital development.

Education

Bachelor's in Computer Engineering – Al Maaref University Airport Avenue, Beirut

(Expected Graduation: July-2026)

Relevant Coursework

- Artificial Intelligence
- Machine Learning
- Computer Networks
- Database Systems
- Cybersecurity
- Software Engineering
- Digital Logic Design
- Embedded Systems
- Control Systems

Experience

Web Development Intern

Water Monster – Beirut, Lebanon

July 2025

- Developed a full-stack web application using React, Next.js, Node.js, and MongoDB.
- Implemented secure authentication and integrated Stripe payment processing.
- Designed wireframes and user-interface prototypes using Figma and Excalidraw.
- Collaborated on application architecture, frontend development, and backend integration.
- Utilized GitHub for version control and deployed production builds using Vercel.
- Contributed to creating scalable and user-focused digital services.

Certificates

- Certificate of completion a **Software Developer Intern**
- Certificate of completion **Hash: Cybersecurity Bootcamp**

Project

Hexapod Robot Control & Reinforcement Learning

- Developed a Reinforcement Learning (RL) solution using MATLAB and Simulink to optimize robot gait and stability.
- Built a digital-twin environment enabling synchronized operation between simulation and physical hardware.
- Integrated Python-controlled Raspberry Pi hardware with Simulink through MQTT and TCP communication protocols.
- Implemented real-time control and monitoring systems for autonomous locomotion.
- Conducted performance evaluation and iterative optimization based on system behavior and collected data.

Technologies

MATLAB, Simulink, Python, MQTT, TCP/IP, Raspberry Pi, Reinforcement Learning

Robotics, Embedded Systems & Digital Design

- Designed and simulated digital logic circuits using Logisim.
- Developed analog and mixed-signal circuit simulations using PSPICE and LTspice.
- Controlled a 6-DOF robotic arm using MATLAB Simulink and Live Scripts.
- Applied embedded-system and control-engineering concepts to real-world automation projects.

Skills

Programming

Python, Java, JavaScript, TypeScript, C++, VHDL

Web & Software Development

React, Next.js, Node.js, HTML, CSS

Databases

MongoDB, MySQL

Data & Analytics

Data Analysis, Data Visualization, Technical Reporting, Microsoft Excel

Engineering & AI Tools

MATLAB, Simulink, Raspberry Pi, MQTT, TCP/IP Socket Programming

Cybersecurity & Networking

Cisco Packet Tracer, Nmap

Design & Collaboration

GitHub, Figma, Excalidraw, Vercel

LANGUAGES

- Arabic — Native
- English — Fluent
- French — Fluent

Reference

Imad Jawhar from University <i>imad.jawhar@mu.edu.lb</i> <i>+961 76091101</i>	Fatima Kabalan from Water Monster <i>fatimakabalan@gmail.com</i> <i>+961 70456311</i>
---	---