

JOSEPH TABBAH

Computer & Communications Engineering Graduate | Software Development | Embedded IoT | AI / Computer Vision

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PROFILE

Computer & Communications Engineering graduate with hands-on experience across software development, embedded systems, IoT dashboards, AI/computer vision, SQL databases, networking, and electronics. Built practical projects using Raspberry Pi 5, Arduino R4 WiFi, Python, OpenCV, MATLAB/Simulink, C/C++, JavaScript/TypeScript, React, REST APIs, and cloud-connected telemetry. Strong fit for junior software, full-stack, embedded/IoT, AI vision, QA/support engineering, and technical graduate roles in Lebanon and remote-friendly teams.

TECHNICAL SKILLS / ATS KEYWORDS

Programming	Python, C++, C#, JavaScript, TypeScript, SQL, MATLAB, Assembly, OOP, data structures, algorithms
Web & Software	React, Node.js/Express, REST APIs, HTML5, CSS3, Bootstrap, SharePoint, Sitecore, responsive design, dashboards
AI / Data / Vision	OpenCV, TensorFlow/Keras, scikit-learn, DeepFace/ArcFace, face detection, object recognition, image processing
Embedded / IoT	Raspberry Pi 5, Raspberry Pi OS/Linux, Arduino R4 WiFi, Arduino IoT Cloud, sensors, ESC/PWM control, telemetry
Electronics & Simulation	MATLAB/Simulink, PSpice, Multisim, Cadence Virtuoso, PIC16F877A, PCB basics, digital logic, CMOS
Tools & Security	Git/GitHub, VS Code, Linux/WSL, Wireshark, Nmap, Kali Linux basics, debugging, testing, technical documentation
Languages	English, Arabic, French; conversational Italian

EXPERIENCE

Software Development Intern | Tamer Freres S.A.L. - Beirut, Lebanon 2025

Improved public-facing website sections by building responsive HTML/CSS/JavaScript interfaces and refining layout consistency for a cleaner user experience.

Supported medical-department software workflows by working on SQL database tasks and organizing data for internal operational use.

Contributed to AI face-detection software in Python and supported custom image assets for Diebold Nixdorf ATM-related banking solutions.

Assisted with ATM installation and technical support, gaining exposure to secure banking hardware, deployment constraints, and cross-team troubleshooting.

Full-Stack Web Development Intern | ISS Software Hive - Beirut, Lebanon 2023

Built and maintained web application components using SharePoint, Sitecore, REST APIs, HTML, and CSS for internal and client-facing projects.

Supported backend integration for a university website project in Dubai by consuming APIs and coordinating frontend requirements with technical constraints.

Produced reusable frontend templates and presented the work during the internship, strengthening communication, documentation, and delivery skills.

Private Tutor - Math, Physics & Coding | Self-Employed - Keserwan, Lebanon 2017 - Present

Helped students and colleagues improve performance in engineering, electronics, programming, communications, math, and physics courses through clear problem-solving sessions.

Translated complex technical topics into practical examples, strengthening leadership, communication, and mentoring skills.

SELECTED ENGINEERING & SOFTWARE PROJECTS

Autonomous Delivery Drone - Embedded IoT, AI Vision & Cloud Dashboard | University Research / Capstone Demo

2025 - 2026

Designed an autonomous drone prototype architecture combining a Raspberry Pi 5 vision/decision layer with an Arduino R4 WiFi flight-control and telemetry layer.

Built a Raspberry Pi computer-vision workflow using camera input and Python/OpenCV logic to detect color-shape targets such as yellow triangle, green circle, and blue rectangle, then lock the selected mission command.

Integrated Arduino R4 WiFi with Arduino IoT Cloud dashboard controls for takeoff test mode, landing mode, stop/emergency control, relative altitude, pressure, temperature, heading, yaw error, and ESC telemetry.

Connected hardware sensors and control modules including BMP280 pressure sensor, GY-91 IMU, QMC/HMC-style magnetometer, Wi-Fi command server, ESC PWM outputs, and MATLAB/Simulink simulation logic.

Demonstrated cross-disciplinary skills in embedded C/C++, Python, Raspberry Pi OS, IoT telemetry, networking, sensor fusion concepts, real-time debugging, and safety-focused system design.

Patient Management System | React, Express.js & SQLite

2025

Developed a full-stack patient-management application with React frontend, Express.js backend, and SQLite database to manage patient records, hospitals, doctors, contact details, and files.

UAV Navigation & Anti-Jamming Simulation | MATLAB / Simulink

2025

Simulated GPS-based UAV navigation under jamming conditions using MATLAB/Simulink, including signal interference modeling and anti-jamming concepts such as filtering and resilient navigation logic.

AI / Vision & Security Projects | Python, MATLAB, TensorFlow, Wireshark

Academic / Personal

Built image-processing and AI experiments including hand-sign recognition, image encryption in MATLAB, and Python-based face-detection/identity-verification workflows.

Applied cybersecurity tools such as Wireshark, Nmap, and Kali Linux basics for network analysis and security-oriented coursework.

EDUCATION

B.E. in Computer & Communications Engineering - Completed

2019 - 2026

| Notre Dame University - Louaize - Lebanon

Built a strong engineering foundation in software development, networking, communication systems, electronics, embedded systems, databases, AI fundamentals, and engineering mathematics.

Developed job-ready skills from the degree: algorithmic problem solving, OOP, data structures, SQL/database design, computer networks, signal/systems thinking, circuit analysis, simulation, debugging, documentation, and technical presentations.

Relevant coursework: Data Structures, Data Communications & Computer Networks, Probability and Statistics for Engineers, Database Systems, Object-Oriented Design, Artificial Intelligence, Electronics, Communication Systems.

Lebanese Baccalaureate - Life Sciences | College Mariste

2018

Champville - Deek el Mehdi, Lebanon

CERTIFICATES, ACTIVITIES & ACHIEVEMENTS

Certificates: Coursera - Neural Networks and Deep Learning; Coursera - Google Cybersecurity.

Clubs: IEEE Club member, ASME Club member, AI Club member, Injaz Lebanon Youth Community member, Forward Digital MENA member.

Presentations: UAV drone system in MATLAB/Simulink; AI and neural networks; quantum computing basics; business plan presentation; internship website template presentation.

Achievement: Winner of El Tahadi El Kabir Season 4 on Tele Liban; awarded a university scholarship opportunity in Turkey.