

Mohamad Hajjar

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EDUCATION

Malta College Of Arts, Science and Technology (MCAST)

Paola, MT

Advanced Diploma in Networks and Systems

Oct 2024 – Present

- Relevant Coursework: Database Management, Software Engineering, Systems Fundamentals, Multi-Media Development, Computer Networks, Web Development, Logic Programming, Embedded Systems

Malta College Of Arts, Science and Technology (MCAST)

Paola, MT

Diploma in IT

Oct 2023 – Jun 2024

- Relevant Coursework: Database Management, Object-Oriented Programming, Computer Networks, Web Development, Computer Systems.

IIDE

Online Course

Digital Marketing Fundamentals

Jun 2023 – Jun 2023

- Knowledge of business and its economic, legal and social context

EXPERIENCE

Independent IT Services Provider

Birkirkara, MT

Freelance IT Support and Systems Services

Oct 2023 – Present

- Performed hardware maintenance, software troubleshooting, and technical support for individual clients
- Maintained and updated client websites, including content changes and security improvements
- Configured home and small-business networks, including router setup, IP addressing, and device management
- Implemented backup and recovery solutions for individual clients
- Provided operating system, printer, and peripheral support in personal and educational environments
- Supported peer and academic projects with cabling, diagnostics, system repair, and general IT assistance
- Built hands-on experience across Linux, Windows, and embedded systems through personal and collaborative projects
- Deployed and customized Odoo ERP environments for multiple clients using Odoo.sh

eAvio d.o.o.

Maribor, SL

Web Development Intern (On-site)

Sep 4 – Sep 26, 2025

- Launched the new eAvio internship webpage using WordPress and Elementor
- Structured content as a central hub for internships across software, electronics, design, and aviation; implemented responsive layouts and maintained brand consistency
- Explored advanced tooling including Windsurf and Astro-based frontends; collaborated with development and design teams and iterated based on feedback

PROJECTS

Database Creation and Maintenance | *Microsoft Access and SSMS*

Oct 2023 – Feb 2025

- Designed and maintained relational databases using Microsoft Access, SQL, and SQL Server Management Studio (SSMS)
- Created and managed tables, queries, forms, and reports to organize, retrieve, and analyse data efficiently
- Wrote and executed SQL queries for data insertion, updates, filtering, and reporting across structured datasets
- Used SSMS to manage database objects, run queries, inspect records, and support database administration tasks

- Performed data validation, record maintenance, and basic database troubleshooting to support accuracy, consistency, and usability

Cisco Packet Tracer Network Design & Advanced Simulation | *Networking*

Oct 2023 – May 2025

- Designed complex office and co-working space networks with wired and wireless connectivity across multiple rooms and operational zones
- Built realistic star, bus, and mesh topologies with full device placement, routing structure, and signal coverage planning
- Configured Cisco routers and switches, including interface setup, inter-VLAN routing, default gateways, and end-to-end connectivity testing
- Implemented VLAN segmentation, trunking, and switchport configuration to separate departments, improve traffic management, and strengthen network organization
- Applied STP, static routing, dynamic routing, and DHCP services to support stable and scalable network communication
- Implemented NAT and PAT for internet access simulation, and used ACLs to control inter-VLAN traffic and secure network resources
- Configured IPv4 addressing schemes and tested ARP, ICMP, MAC address resolution, and packet flow for troubleshooting and validation
- Used Wireshark alongside Packet Tracer to analyse HTTP POST vulnerabilities, identifying plain-text credential exposure over unsecured protocols
- Documented topology decisions, network behaviour, router and switch configurations, and security findings for assessment reports and technical submissions

Virtual System Setup with Virtual Machines | *VMware Workstation Pro*

Feb 2024 – Feb 2026

- Deployed and managed a virtualized network environment using VMware ESXi, hosting multiple virtual machines for testing, configuration, and hands-on infrastructure learning
- Configured and maintained VMware ESXi settings, including virtual networking, resource allocation, datastore usage, and VM provisioning across the environment
- Set up Windows Server 2025 to run and manage multiple virtual machines and services within the lab environment
- Configured core infrastructure services including a firewall, DNS server, and web server to simulate a functional enterprise-style network
- Used the environment to test network security, DNS behaviour, server roles, and web server configurations in an isolated setup
- Performed controlled security testing in isolated virtual machines to explore malware behaviour and defensive security configurations

First Global Challenge 2024 | *Robotics*

Jun 2024 – Oct 2024

- Contributed to the hardware assembly and preparation of the competition robot
- Developed and tested robot functionality using Java
- Collaborated with participants from multiple countries in an international competition environment, strengthening teamwork, communication, and problem-solving skills

Smart Home Security System | *Raspberry Pi*

Apr 2025 – May 2025

- Designed and implemented a real-time smart home security system using Python and Raspberry Pi
- Integrated facial recognition using OpenCV and face_recognition, with blink detection implemented through dlib and the Eye Aspect Ratio (EAR) algorithm

- Enabled license plate recognition using YOLOv8 and EasyOCR with dual USB cameras for front door and garage monitoring
- Developed a PySimpleGUI-based interface for system navigation and control, including face registration, plate registration, and live camera feeds
- Configured GPIO-based control of buzzers and LEDs to indicate access status for authorised and unauthorised faces and vehicles
- Integrated a Telegram bot to send real-time alerts and captured images of unauthorised access attempts
- Managed logs, images, and recognition data locally using Pandas and NumPy, while supporting secure updates to stored face encodings and plate records

Beau Séjour Hotel Website Project | *HTML, CSS, JavaScript, Bootstrap*

Mar 2025 – May 2025

- Designed and developed a fully responsive multi-page hotel website for a real-world hospitality case study
- Built a professional user interface with consistent branding, reusable header and footer components, and a structured multi-page layout
- Implemented a dynamic image carousel using jQuery and Slick Carousel without relying on Bootstrap components
- Applied internal and external CSS in a layered structure to maintain responsive, conflict-free styling across pages and screen sizes
- Integrated key website features including booking forms, gallery pages, shop pages, modal pop-ups, and smooth visual transitions

TECHNICAL SKILLS

Languages: English, Arabic, Maltese

Programming Languages: Python, SQL, Bash, C#, HTML, CSS

Systems & Infrastructure: Linux, VMware, Docker, Raspberry Pi OS

Networking & Security: Cisco Packet Tracer, Wireshark

Development Tools: Git, VS Code, Visual Studio, PyCharm, Windsurf

Computer Vision & Automation: OpenCV, dlib, YOLOv8, EasyOCR, PySimpleGUI, GPIOZero, Telegram Bot API

Web & Platforms: WordPress, Elementor, Astro, Bootstrap, Odoo.sh, Odoo ERP