

Eleanor K. CHEBLY

Mechatronics Engineer

Lebanese | 25 July 2002
Mansourieh El Matn, Lebanon
(+961) 76 331 791
eleonor.chebly@gmail.com
[LinkedIn: Eleanor Chebly](#)

WORK EXPERIENCE

JUL 2025 - PRESENT	Research and Development Engineer at MEDVISION - Dekwaneh, Lebanon - Designing and developing a custom PCB based on the STM32MP15 microprocessor for deployment in medical-grade devices. - Designed and implemented a DAQFactory-based automation interface to monitor and control 34 hospital patient-room thermostats, integrating HVAC control with real-time data acquisition (Modbus RTU to Modbus TCP). - Contributed to the electronic system design of an Operating Room Control Panel (ORCP), integrating a medical-grade PC, touchscreen HMI, and secure Modbus-based communication. - Documented and drafted electrical schematics and system wiring diagrams, ensuring clarity, technical accuracy, and compliance with applicable standards. - Performed system-level testing and validation, troubleshooting hardware-software interfaces, verifying control logic integrity, and producing structured technical documentation for deployment and compliance. - Collaborated with multidisciplinary engineering teams to optimize system performance, ensure adherence to technical standards, and support hardware-software integration. - Developed a complete SCADA-based lighting automation program using DAQFactory, implementing scheduling logic and real-time supervisory control in hospital environments. - Developing a microcontroller-based RF communication device for surgical lighting control, designing the embedded firmware and RF interface to ensure deterministic communication, packet error mitigation, and resilience to electromagnetic interference in clinical environments.
JUL 2024-JUL 2025	Mechanical Engineering Intern at HÔTEL DIEU DE FRANCE - Achrafieh, Lebanon - Collaborated with multidisciplinary teams and consultants in high-standard healthcare environments (operating rooms, endoscopy units...), contributing to the execution of over 15 projects while supporting technical system reviews and ensuring compliance with regulatory requirements.

EDUCATION

2020 - 2025	Engineering Diploma (Masters equivalent) in MECHANICAL ENGINEERING, <i>Mechatronics</i> Lebanese University, Faculty of Engineering - Branch II (ULFGII) - Roumieh, Lebanon GPA 3.5/4 - TOP OF CLASS
2020	General Sciences Baccalaureate Collège Notre Dame des Sœurs Antonines – Hazmieh, Jamhour <i>Graduated with Honors</i> -GPA 18/20

PROJECTS

OCT 2025	Final Year Project: Operating Room Control Panel - Designed and implemented an embedded control system for operating rooms, integrating hardware and software for real-time monitoring and coordinated control of medical devices. - Architected the system around an STM32F407 Discovery Board and Raspberry Pi 4, developing a Qt-based graphical user interface (GUI) to enable structured system interaction and supervisory control. - Implemented and validated communication with medical peripherals using UART, RS-485, and BACnet MS/TP protocols, ensuring reliable data exchange and seamless integration with hospital infrastructure.
FEB 2025	6-DOF Robotic Arm Control System - Repaired and programmed a 6-servo robotic arm using Arduino to restore full motion control, integrating a functional gripper and developing custom motion algorithms based on inverse kinematics. Ultrasonic Avoidance Robot Car - Built and programmed an autonomous robot car equipped with an ultrasonic distance sensor mounted on a swiveling platform for real-time obstacle detection and avoidance.

CERTIFICATES

2026	Mastering Microcontroller and Embedded Driver Development (Udemy)
------	---

TECHNICAL SKILLS

EMBEDDED SYSTEMS	STM32, Arduino, Raspberry Pi, Firmware Development
DEVELOPMENT	MATLAB, Simulink, VSCode, Visual Studio, STM32CubeIDE, Arduino IDE, DAQFactory, ISPSOFT, DCISOFT, COMMGR
DESIGN TOOLS	AutoCAD, Autodesk Inventor, Proteus, HAP
PROTOCOLS	Modbus RTU, Modbus TCP/IP, UART, SPI, RS-485, BACnet MS/TP
TESTING	Modbus Poll, Modbus Slave, Ananas, Anybus Configuration Tools
PROGRAMMING	C++, C, Python, VHDL, PLC
DOCUMENTATION	LaTeX, Microsoft Word, Excel, PowerPoint

LANGUAGES

ARABIC: Mothertongue	ENGLISH: Fluent	FRENCH: Fluent (B2 Certificate – 92.0)
----------------------	-----------------	--

INTERESTS

2021 - 2025	SCOUTS DU LIBAN (SDL), Group Leader - Founded and grew a team to 60+ members, fostering teamwork and project management skills. - Coordinated cross-functional activities, ensuring effective collaboration and successful project execution. - Organized fundraising and resource management efforts.
-------------	---