Nicolas El Chammas
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PERSONAL PROFILE

Multi-lingual recent graduate in Mechatronics and Robotics Engineering (MEng) with expansive experience in designing, programming, and simulating platforms; combined with an ever-growing interest in the Automated Technology field. Began working as a Robotics Engineer for the Cobot company Islington Robotica, and currently working as a Firmware Engineer at MultiLane.

EDUCATION

University of Leeds, School of Electronic and Electrical Engineering • 2018 – 2022
Mechatronics and Robotics Engineering (Meng)
Graduated with a 2:1.

Lycée Franco-Libanais Alphonse de Lamartine (School) • Lebanon • 2004 – 2018
French Baccalaureate • 2016 – 2018
Overall average of 14.7/20. Assessment was comprised of various disciplines: Mathematics, Advanced Mathematics, Physics & Chemistry, Biology, English Literature, French Literature.

RELEVANT MODULES AND ACADEMIC PROJECTS

ELEC2645 – Embedded Systems Project
-Project entailed using C++ to create a game on the Mbed platform and implement it on a "Gamepad".
-Created a functional and dynamic "space rocket" inspired game with a user-friendly homepage.

COMP3611 – Machine Learning
Module that focused on the Algorithm Choice and Training topics. It dove into the types and applications of Neural Networks and paralleled the theoretical information with Python-based exercises.

MECH2300 – Design and Manufacture for Mechatronics and Robotics -
Learned how to systematically approach engineering design problems through using solid modelling software, engineering design processes, manufacturing processes, and design and build activities.

ELEC 5032M – Modern Industry Practice
-Group project: the global provision of clean and affordable renewable energy by creating an automated beehive system of sunflower-inspired solar panels in the Sahara Desert.
-Personal contributions: Writing the literature review, developing a safety system for the powerplant and outsourcing cost-effective components.

COMP3631– Intelligent Systems and Robotics
-Group Project: designed a python program that controls a Turtlebot in a Gazebo environment, on Linux.
-Successfully programmed Turtlebot to move in between rooms and perform colour detecting tasks.

MECH3895 – Individual Mechatronics and Robotics Project
Project: Created a user-friendly Virtual Reality-integrated glove design to use as an interface for wrist rehabilitation. Utilized human-centered designing, iterative CAD prototyping, and MATLAB-based kinematics testing.

MECH5030 – Team Project
-Project: develop an ergonomic wearable haptic device to aid deafblind people with indoor navigation. -

The individual contribution: front-end user insight and market research, control system design, PCB design/simulation, human-centered design; usability testing, and testing of haptic hardware.

ELEC2665 – Microprocessors and Programmable Logic
Gained hands-on experience in digital logic design and implementation. Learned to write and simulate Verilog HDL in Modelsim, design memory hierarchies, and program circuits onto FPGAs using Quartus.

WORK EXPERIENCE

Junior Firmware Engineer at MultiLane (01/07/2025 – now)
-Developed embedded C firmware for AI data center connectivity products, including high-speed electrical cables and optical loopback transceivers.
-Implemented and validated CMIS-compliant firmware features, integrated new APIs into multi-layered firmware projects, performed hardware debugging and BER/SNR/power-loss testing, and optimized cable signal integrity through lane configuration, squelching, reversal, and equalization. -
Troubleshot complex test setups, documented findings, and collaborated with software engineers on diagnostic GUI development.

Robotics Engineer Intern at Islington Robotica (20/03/2023 – 07/06/2023)
Developed an autonomous navigation software for an at-home robot. Process was developed on Linux using Python and included an optimized global planner and a sonar-based obstacle avoidance feature.

Mechatronics Engineer Intern at Babikian Automation (01/10/2024 – 10/01/2025)
-Worked on custom PCB design for a startup prototype, contributed to firmware development for testing electronic components, and got involved in pneumatics and automation systems.
-Worked on the mechanical design – using my Solidworks CAD skills – of another startup's product, which gave me insight into the iterative development process.

TECHNICAL SKILLS

- Proficient in several systems and platforms: STM32CubexIDE, MPLABxIDE, MATLab , Mbed, Solidworks, Autodesk Fusion 360, ModelSim, LabView, Gazebo and Unity platforms.
- Successfully finished the "Human Factors and Usability Egineering" course provided by The Arizona State University. (Decembre, 2024)
- Competent in coding languages: C/C++, python.
- Fluent in the English, French and Arabic languages (speaking, reading and writing).

OTHER SKILLS AND ACHIEVEMENTS

- Teamwork and Adaptation
  Won second place in MedTech's Leeds Innovation Program and got invited to share the biotech concept at Bionabu's online MedTech Student Showcase in 2022. The program task called for collaborative work between engineering, medicine, and business students; centered around conceptualizing and designing a market-ready medical device.
- Volunteer with the Rebirth charity (15/10/2023 – 05/07/2024)
  Joined a charity called Rebirth which aims to facilitate access to higher education for children in care, by providing tailored and diversified mentorship and orientation programs. Joined the committee team and lead the development of a mentoring training program.

REFERENCES PROVIDED UPON REQUEST.