

## **EDUCATION**

<b>2019 - Present</b>	<b>Lebanese American University</b> Currently a senior pursuing a bachelor's degree in Mechatronics Engineering GPA 3.7, on the Dean's List during all enrolled semesters Based on academic achievement and active approach to learning I was admitted to LAU Honors Program as well as granted an academic scholarship from LIFE in which I am also a mentee	<b>Byblos, Lebanon</b>
<b>2015-2018</b>	<b>Armenian Evangelical College</b> Received the Lebanese Baccalaureate Certificate of Secondary Education with high distinction	<b>Beirut, Lebanon</b>

## **ENGINEERING EXPERIENCE**

<b>July 2023 - Present</b>	<b>GasVisor GmbH</b> <b>Mechatronics Engineer (Remote Student Job)</b> <ul style="list-style-type: none"><li>Part of the PCB design team with research and design responsibilities for optimization and signal integrity</li><li>Editing and designing several circuitry schematics on KiCAD</li><li>Involved with the software team to enhance communication with the IoT device</li></ul>	<b>Munich, Germany</b>
<b>June 2023 - Present</b>	<b>LUXEED Robotics</b> <b>Mechatronics Engineer (Internship)</b> <ul style="list-style-type: none"><li>Responsible for integrating different project parts onto ROS2 for proper autonomous control of the agricultural robot</li><li>Part of the circuitry team and the robot assembling team, mainly handling the galvanometer and its related software tools, in addition to implementing the transformation matrices between the different components</li><li>Part of the software team to implement the ML model to be integrated as the controller for object detection using Computer vision and deep learning</li><li>Various research topics were under my responsibility that include hardware assessment for purchase and manufacturing</li></ul>	<b>Beirut, Lebanon</b>
<b>July 2023 - Present</b>	<b>BmB Smart</b> <b>Robotics and Python Tutor (Part-time)</b> <ul style="list-style-type: none"><li>Robotics tutor at the BmB smart summer camp for kids between the ages of 10 – 14 years old</li><li>Python tutor for beginners and advanced students at the summer camp for 14+ year old students</li></ul>	<b>Beirut, Lebanon</b>
<b>June 2023 - July 2023</b>	<b>Joun Technologies</b> <b>Research Mechatronics Engineer (Internship)</b> <ul style="list-style-type: none"><li>Wrote a whitepaper about the integration of IoT in smart cities. Visit this link to view paper titled "IoT in Smart Cities" on Joun technologies website: <a href="https://jountech.com/library">https://jountech.com/library</a></li></ul>	<b>Beirut, Lebanon</b>
<b>June 2022 - Feb 2023</b>	<b>MEACOR INC.</b> <b>Research and Development Mechatronics Engineer (Internship / Part-time)</b> <ul style="list-style-type: none"><li>Responsible for the design, assembly, sensor testing, and coding of an inhouse produced reflow machine and another pressure and flow regulating machine based on PLC programming and control.</li><li>SolidWorks was the tool used for all CAD work; Python was the main programming language as raspberry pi was the controller used in the reflow machine. C++ was also used since Arduino projects were used in the prototyping processes. Other than sensor communication and coding, python libraries were used for API implementation.</li><li>Siemens PLC Programming was used for designing a pressure and flow regulating machine. The PLC code was done using TIA Portal which is the Siemens Factory automation platform. The code included a UI and front-end design, and backend PLC programming blocs to successfully design the machine to be used in a testbed project in the bio-mechatronics field, the main market of MEACOR.</li></ul>	<b>Beirut, Lebanon</b>

**COMPUTER PROGRAMMING and Skills:** Python, Java, C++, ROS, ROS2, Machine and Deep Learning, Javascript, CSS, HTML, Unity

**SOFTWARE PROFECIENCY:** MATLAB, LabView, Quartus, AutoCAD, LTSpice, SOLIDWORKS (certified), Visual Studio Code IDE

## **Additional Courses:**

- Neural Networks and Deep Learning - **Coursera**
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization - **Coursera**
- Structuring Machine Learning Projects – **Coursera**
- Convolutional Neural Networks (In progress) – **Coursera**
- Fundamentals of Reinforcement Learning (In progress) – **Coursera**
- Sample-based Learning Methods – **Coursera**
- Prediction and Control with Function Approximation – **Coursera**
- A complete Reinforcement Learning System (In progress) – **Coursera**
- Autonomous Mobile Robots (ETH) – **Edx**

## **PROJECTS**

**Jun 2020 – Present**

- Designed and simulated a mapping and navigation drone control project on ROS. Project included a SLAM part and a path finding part. The path finding algorithm implemented was Dijkstra. Python was the main language used.
- In consequence with the latter, I am part of an undergoing research in aerial robotics. The research topic is optimizing collision avoidance by researching optimal methods of control, path finding, while integrating AI and Computer Vision as well.
- Designed and assembled a self-driving, self-parking car with cruise control based on Fuzzy logic.
- Designed and assembled a self-driving rover to detect and collect pre-specified objects using raspberry Pi and OpenCV – Python.
- Designed and simulated a fully functional elevator. Design included all mechanical and actuating components as simulation was done on SolidWorks.
- Designed and implemented a shape and colour robotic arm using raspberry Pi and OpenCV – Python.
- Designed, simulated, and tested a car suspension system using SOLIDWORKS.
- Designed and simulated a tank on SOLIDWORKS along MATLAB codes simulating belt and pedal functionality.
- Designing a Virtual and Augmented reality environment along with the headsets and gloves with haptic feedback with the aim of helping paralysed patients with a smoother recovery. Software used are Unity and Python

## **GENERAL WORK EXPERIENCE**

**Oct 2021-  
Present**

### **Tutoring**

**Byblos, Lebanon**

- Coding tutor at Geek Express
- Freelance Tutor for university and high school students

**Aug 2021 -  
May 2022**

### **LAU HULT PRIZE**

#### **Member of the LO and Event Management Team**

**Byblos, Lebanon**

- Responsible for handling communication between different teams and the campus director
- Preparing forms and communicated with the different participating and organizing teams in addition to organizing and monitoring team meetings
- Organizing and managing all competition events such as info sessions, training events, and the final conference event

## **LANGUAGES**

Fluent English and Armenian, Native Arabic, Basic French, Learning Spanish

## **VOLUNTEER WORK**

**Nov 2019 -  
Dec 2019**

Taught mathematics and science to Palestinian students in the Sabra and Shatila refugee camps

**2017 - 2018**

Volunteered as a health carer at the Armenian Elderly Home in Bourj Hammoud

**Nov 2021 -  
May 2022**

Taught mathematics and science to Palestinian students in the Sabra and Shatila refugee camps