

## Nour Ardo

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### EDUCATION

#### **American University of Beirut, Beirut**

- Bachelor of Computer and Communication Engineering, expected May 2022
- Track in Artificial Intelligence
- Dean's List for all attended semesters, **GPA: 4.0 (91.68%)**
- Academic Scholarship USAID

### EXPERIENCE

#### **Humans and machines lab, AUB**

*Research assistant, August 2020 – Present*

- Develop an app with JavaScript that detects the confusion level of students.
- Enhance the online learning experience through implementing machine learning models for students' engagement detection based on their facial cues and EEG signal.
- Collect data using Emotiv epoc+ machine and process it.
- Analyze results and map facial cues to EEG.
- Apply Federated Learning at a later stage to ensure data security and privacy of users.

#### **Summer@EPFL, Switzerland**

*Research intern, June – August 2021*

- Designed a system that receives secret instructions, and disassemble them using their power consumption.
- Developed a state machine using hardware language and integrated a time delay sensor.
- Tested the design on a Sakura\_X FPGA.
- Conducted different experiments to study the correlation between some instructions and their power consumptions.
- A paper on remote side channel disassembly attacks of FPGAs using this system is to be published.

#### **Chemonics, Lebanon**

*Intern, August 2020*

- Resolved the COOP's leak of data problem by developing an interface that stores and analyzes the production.
- Designed with a team of 6 students an environmentally friendly solution based on a sedimentation process to treat the wastewater of the mill.

### PROJECTS

#### **EECE 501, Final Year Project - Fall 2021-2022**

- Design, implement and validate a voice biometric chip as part of the Tap Out Lebanon Program to provide security to the user by using RISC-V processor core and machine learning algorithms.

#### **EECE 692, Computer Vision - Fall 2021**

- Developed in a team of 4 radiometric and photometric calibration, edge and corner detection from scratch using Matlab.

#### **EECE 693, Neural Networks - Spring 2021**

- Applied LIME method on an Arabic speech recognition model to study its interpretability.
- Modeled English to Arabic translation using NLPs, image captioning using RNNs and face detection using resnet50.

#### **EECE 655, Internet Security - Fall 2020**

- Worked in a team of 3 to implement intrusion detection in real time for Port Scan and DOS attacks.  
Developed different deep learning models (SVM and KNN) using Python with Keras and TensorFlow libraries to point to the most accurate and effective model.
- Developed DoS attack and detection tools with Scapy libraries.

#### **EECE 430, Software Engineering - Spring 2021**

- Developed a web based application for medical consultation using Django.

#### **EECE 490, Introduction to Machine Learning - Fall 2020**

- Participated in the Human Centered Design process to solve the real life problem of potholes on the roads by implementing a convolutional neural network model that detects the potholes.

#### **EECE 455, Cryptography and Network Security - Fall 2020**

- Programmed a graphical user interface that displays a step by step encryption and key expansion of AES using Python.

### **EXTRACURRICULAR ACTIVITIES**

#### **Jarrah Scout, Ras-Baalbeck**

*Member and Leader , June 2007 - Present*

- Joined and headed more than 10 camps in scout.
- Contributed to breast cancer awareness events.
- Supported Pere Majdi Allawi foundation and orphans at Jabbouleh private school by raising 2500\$.
- Succeeded in completing “Free Being Me” program and transferring this knowledge to younger generations.

#### **Action for Lebanon, Hamra**

*Volunteer, April 2019*

- Helped in organizing the educational talks that were provided by professionals and that aimed to raise awareness in different topics like health care and parental roles.
- Sold tickets for the event

#### **AUB Jaffet Libraries, AUB Hamra**

*Volunteer, Fall 2019*

- Helped students and professors to have access to books or articles.
- Made sure to have a quiet area for studying.

#### **Next Step AUB, AUB Hamra**

*Teacher assistant, October – December 2018*

- Cooperated in the lectures offered for the students with special needs at AUB.

#### **Peace of Art, Bekaa**

*Volunteer, December 2018*

- Assisted in art classes for young students.
- Received and organized applications for new registrants.

#### **More events:**

- Amplified knowledge in AI in Human rights, multimedia, career aspiration, time management, E-Portfolio, problem solving and project design through workshops.
- Mentored new USP students.

### **SKILLS**

**Technical Skills :** Python, C++, JAVA, Matlab, scikit-learn, Pytorch, Keras, TensorFlow, Spice, VHDL, HTML, JavaScript, CSS, RISC-V assembly language, Django, MongoDB, SQL.

**Languages :** Native Arabic speaker, Fluent in English and French.