## Anis D. Ismail, Machine Learning Engineer

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#### **EDUCATION**

#### Lebanese American University, Byblos, Lebanon

BE in Computer Engineering

- Distinguished List of the School of Engineering since Fall 2017
- Member of LAU Honors Program
- Full Merit Scolarship recipient

## **PROJECTS/PUBLICATIONS**

#### **Automated Generation of Chemical Reactions with Generative Language Models**

Jan 2020–Present

Aug 2017-Jun 2022

CGPA: 3.82

Under the Supervision of Dr. Joe Tekli, Electrical and Computer Engineering Department, LAU, Lebanon (In Progress)

- Tested and compared multiple generative language models architectures for augmenting existing chemical reactions datasets
- Investigated the effect of Generative Adversarial Models on improving the quality of the generated data.

# Scheduling the Movement of Unmanned Aerial Vehicles in Connected Vehicular

Sep 2019–Present

**Networks Using Deep Reinforcement Learning** 

Under the Supervision of Dr. Wissam Fawaz, Electrical and Computer Engineering Department, LAU, Lebanon (Pending Publication)

• Developed a Dueling Deep Q-Network in **Python and Java** to minimize average packet delay in UAVs assisted VANETs and reached a **60% reduction** in average packet delay in single UAV assisted VANETs case.

#### Detecting Muon Momentum in the CMS Experiment at CERN using Deep Learning

Aug-Nov 2020

• Developed multiple Deep Learning approaches to improve the precision of muon detector systems and reached an **accuracy of 85%** when testing on Monte-Carlo simulated data.

#### **PROFESSIONAL EXPERIENCE**

#### **Computer Vision and Machine Learning Intern at BMW Group**

Dec 2020-Present

- Developed multiple components for 3D Collision Avoidance using Nvidia's Isaac, C++, and ROS to be integrated into the navigation stack of the Smart Transfer Robot.
- Currently developing a new API for optical character recognition for the BMW TechOffice Munich GitHub repository.

## **Technical Instructor Lead at Beirut AI**

Oct 2020-Present

- Responsible for supervising and guiding instructors in preparing their workshops for Beirut AI quarterly AI Weekends.
- Delivered the Introduction to Deep Learning with Pytorch workshop in the last AI Weekend in November 2020.

#### **Machine Learning Intern at Zaka**

Jul-Oct 2020

- Worked on an image segmentation project to identify weeds and their stems from crops.
- Developed domain-specific metrics to evaluate the performance of multiple architectures on training and testing data.

Research Assistant at the Electrical & Computer Engineering Department, LAU
Alumnus of the Research Science Institute at Massachusetts Institute of Technology

Sep 2019–Present

Jun-Aug 2016

#### **EXTRACURRICULAR & LEADERSHIP EXPERIENCE**

| President of the Artificial Intelligence Club at LAU                    | Sep 2020–Present |
|---|------------------|
| Won first runner-up in BMW Group Beirut AI Hackathon 2019 at LAU        | Oct 2019         |
| Ranked among top ten in the Lebanese Collegiate Programming Competition | Oct 2019         |
| Ranked among top five teams in LAU Collegiate Programming Competition   | Mar 2019         |

#### **COMPUTER SKILLS**

**Programming Languages:** Python, Java, C++, Bash shell **Data Manipulation and Visualization:** 

MS Excel, NumPy, Pandas, Matplotlib, Tableau, Jupyter

Machine Learning and Deep Learning: Scikit-Learn, TensorFlow, Keras, Pytorch DBMS Languages: SQL, MySQL, MS Access

Markup Languages & Web: HTML, CSS, Markdown

Version Control Systems: Git

### **LANGUAGES**

Arabic (Native)

English (Fluent)

• French (Very Good), DELF B2