HASSAN NASRALLAH
COMPUTER AND COMMUNICATIONS ENGINEERING

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EDUCATION:

Degree: Diploma in Electrical and Electronics Engineering

Major: Computer and Communications

University: Lebanese University – Faculty of Engineering
|| 2015 – 2020 ||

OBJECTIVE:

A passionate computer and communications engineer, who seeks to achieve high level knowledge in programming and machine learning through research, continual learning, and intensive project work.

LANGUAGE PROFICIENCIES:

Arabic (Native)

English (Proficient) [7.5/9 IELTS Score].

EXPERIENCE:

CNRS - *August 2019 –January 2020:*
Research intern in machine learning, earth observation and computer vision over regular and satellite imagery at the Geospatial Earth Observation group at the National Council for Scientific Research (CNRS) under the supervision of Dr Ali J. Ghandour.

Ogero - *July – September 2019:*
Intern in network design and testing at Ogero.

INTERESTS:

Deep Learning – Computer Vision – Remote Sensing – Algorithm Design – Game development – Reinforcement Learning

EXTRACURRICULAR ACTIVITIES:

Gamer – Football fan – Movies and TV series

SKILLS:

Coding: C, C++, Python, Java, HTML, VHDL, Assembly, SQL, Arduino

Software: MATLAB, AutoCad, Proteus, LabView, Android Studio, LabVolt, PyGame.

Operating Systems and Environments: Windows, Linux [Ubuntu], Google Cloud Platform, and Google Colab.

Traits: Dedication & Commitment – Team Work – Planning and advising.

MACHINE LEARNING:

Excellent research skills and deep knowledge and understanding in machine learning. Highly skilled in python programming for deep learning [Pytorch, Keras, Tensorflow, Numpy, Apex, Tensorboard].

PROJECTS:

[Final Year Project]

Lebanese urban mapping using high resolution satellite imagery. Implemented training and testing pipelines in Pytorch, using optimized and modern techniques with a systematic hyper-parameter search to create Lebanon's first buildings map.

[International Challenges]

Open Cities AI Challenge: Training various UNet and PSPNet models with multiple backbones like ResNext50, Inception ResNet-V2 and Efficient-Net for building segmentation over aerial drone images for different African cities with a wide range of spatial resolution.
Rank: 26th/1106 competitors

xView2 Challenge: Building Segmentation and damage assessment from satellite imagery. Designed and trained UNet and MaskRCNN segmentation models, in addition to a VGG16 damage classifier. **Achieved high localization score (84.4%).**

Google's 2019 Open Images Challenge: Big Data management of the Open Images large dataset, and training of a 500 class FasterRCNN and YOLO object detection models in Tensorpack and Keras.

[University Projects]

EMNIST Classifier: A faithful 250 line Tensorflow implementation of a modified LeNet CNN model for character classification trained and tested with 90% accuracy.

2D Plotter: Programming and designing a 2 axis geometrical shapes ink printer in Arduino using computer pixel algorithms.

Smart Garage: Arduino programming for an Infrared, LED, water sensor, and servo motor's based smart house garage.

Sumo Bot: Programming and designing a fighting car robot in Arduino.

C++, SQL, and Java Workshops and Labs: Object oriented programming and SQL tasks.