

# Batool Ibrahim

Electrical and Computer Engineer

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☎ 70 35 32 31

📍 Beirut, Lebanon

👤 27 February, 1998

## Education

Master in Electrical and Computer Engineering 2021-Present  
American University of Beirut

Courses:

Machine Learning, Computer Vision, Solar and Wind Energy

Master in Artificial Systems and Robotics 2019 -2020  
Lebanese University - Faculty of Engineering

Courses:

Advanced Data Analysis, Advanced Statistical Learning, Optimization, Control of Non-Linear Systems, Modeling of System's Dynamics, Fault Diagnosis and Fault tolerant Control

Electrical and Electronics Engineering Diploma 2015-2020  
Lebanese University - Faculty of Engineering

Courses:

C/C++, Neural Networks, Data Structure, Fuzzy Logic, Automatic Control, Electrical Installation and Electrification, Power Electronics, Electric Machine, Energy Production, Signal Processing

## Employment

Researcher Assistant in VRL 2020-2021  
American University of Beirut

Robotics and Machine Learning

Teacher Assistant 2021-2022  
American University of Beirut

Electric Circuits Laboratory

Computer Organization Laboratory (FPGA, Microcontrollers)

## Projects

Cocktail Party Problem Solution For Mixed Arabic Audio Dataset  
Using Deep learning

Separating overlapped voices in Arabic audios using deep learning.

## Skills

MATLAB/SIMULINK  
C/C++  
Python  
Machine Learning  
Deep Learning  
FPGA/VHDL  
Electrical Installation

## Software

LabVIEW  
Arduino  
HTML  
AutoCAD  
HOMER  
Ecodial  
Proteus  
Proton  
Eagle  
MPLAB  
MikroC  
FluidSIM  
Delta for PLC (WPLsoft )  
ROS

## Languages

Arabic  
English  
French

## Projects

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UAVs 3D motion primitives classification using deep learning

Educational Robot with User Interface using Python

Formation Flight Control of Multi-UAV System using MATLAB/SIMULINK

Fault Tolerant Control in Formation Flight

Non-linear control of a Quadrotor Helicopter

Adaptive PID Fault Tolerant Control of Single-link Flexible Manipulator

Automatic Power Factor Corrector using microcontroller PIC16F

Adaptive Control of a Human-Driven Knee Joint Orthosis

3D shape reconstruction using Photometric stereo in Computer Vision

## Personal Experience

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Summer training at Electricite du Liban (EDL)

Participated in a labview workshop at LabVIEW Club of Lebanese University.

Finished an Arduino workshop.

Summer training at Ghobeiry Municipality Center for Vocational Training concerning industrial informatics and Automation

Joined a PhD thesis team in order to apply robotics for educational purposes.

## Publications

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Formation Flight Control of Multi-UAV System Using Neighbor-based Trajectory Generation Topology (2020)

WSEAS TRANSACTIONS ON APPLIED AND THEORETICAL MECHANICS, Volume 15, pp. 173-181.

Fault-Tolerant Control in Leader-Follower Distributed Formation Flight System (2021)

29th Mediterranean Conference on Control and Automation

Incremental learning for enhanced personalization of autocomplete teleoperation (Second Author, 2022)

2022 IEEE International Conference on Robotics and Automation (ICRA)