



# MOHAMMAD KASSEM

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## OBJECTIVE

I am a graduate Mechanical Engineer, currently undergoing my M2 studies in Robotics and Intelligent Systems, with a great ambition to work and gain further experience in the domain of mechanical engineering and mechatronics. Thus, I am seeking a position that gives me the opportunity to pursue my goals.



## EDUCATIONAL BACKGROUND

**M2 program, Robotics and Intelligent Systems | Lebanese University Faculty of Engineering III (Also registered to the UTC Masters equivalent program)**

2018-2019

**Mechanical Engineering, Energetics | Lebanese University Faculty of Engineering III**

2015-2018

Mention: Very Good

**Common Trunk | Lebanese University Faculty of Engineering III**

2013-2015

Mention: Good

**Bac II in General Sciences | Al-Mustapha High School**

2012-2013

Mention: Good



## EXPERIENCE AND PROJECTS

**Internship at in energetic design | ARCH Consulting**

**Model Free Fault Tolerant Control of Hexarotor UAV | Current Thesis Project**

Simulation of Model Free Control in the presence of actuator faults using Simulink, and real life application of the control on the Hexarotor UAV

**Genetic Algorithm Implementation for the Optimization of Thermal Design of Buildings | Final Year Project**

Cost vs Energy optimization of typical residential and non-residential buildings in Beirut, where the building envelope, HVAC system and lighting system were set as the design variables, and a payback analysis was done to study the feasibility of the energy saving methods.

Realization and Arduino-based control of a 3D printer prototype | Mini project  
Realization of an Oscillating Water Column Prototype | Mini project  
Energetic Design of a house's HVAC system using DesignBuilder | Mini project  
Optimization of Hydroelectric Power Plant performance | Mini project  
Binary and Multi Class Classification based on Statistical Learning methods and Data Mining: QDA, LDA, NBC, Euclidean and Logistic Regression | Mini project  
Backstepping and Sliding Mode Control of a Quadrotor UAV using Simulink | Mini project  
Transonic Simulation of an airplane wing using Ansys to study the behavior of the shock on the wing | Mini project  
Step and Impulse response identification and Frequency Analysis | Mini project



## SKILLS

**Software:** C, Matlab, Ansys, Simulink, AutoCAD, Autodesk Inventor, SolidWorks, Design Builder, Microsoft Office

**Hardware:** Arduino, CNC Machinery, Milling Machine, Lathe, Drill

**Languages:** • Arabic: Native • English: Fluent • French: Good



## INTERESTS AND ACTIVITIES

- Mechanical Engineering
- Optimization and Control
- Writing, reading, arts and crafts, drawing, football, listening to music, video games