

PERSONAL INFORMATION

Mustafa Kamal Abdel Kareem Abdel Mohsen

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📅 Date of birth 7 August, 1994 | 🇪🇬 Nationality Egyptian

EDUCATION

(February 2017 – present)

M.sc in propulsion in aerospace engineering (work in progress)

- **Courses:**
 - 1) Finite Volume Method In Aerospace, 2) Finite Element Method In Fluid Mechanics, 3)Advanced Numerical Analysis, 4) Jet Engines
 - 5) Experimental Methods In Aerospace , 6) Aeroelasticity, 7)Multi Input Multi Output Modern Control, 8)Technical Writing
- **GPA:** 4.0
- **Thesis(in progress)** : “active flow control for wind turbine using plasma”
- **Supervisors** : prof. Mohamed Madbouli Abdelrahman and prof. Ahmed Eltaweel

(September 2012 – June 2017)

Bachelor of science, B.Sc.in Aerospace Engineering (Taught In English)

Cairo University, Faculty of Engineering, Aerospace Engineering Department, Giza, Egypt.

- rank: 4th /125
- Grade: Distinction with honors (**89.98 %**), CGPA: **3.89/4**

(September 2009 – June 2012)

HIGH SCHOOL

HOSNI MUBARAK FOR BOYS school, Cairo, Egypt.

- Grade: Excellent (**99.4 %**)

WORK EXPERIENCE

(Fall 2017 – present)

Teaching assistant in aerospace engineering, Cairo university for the following courses

- Courses:
 - 1)Heat Transfer, 2) Rocket Propulsion , 3)Auto Pilot , 4) Assembly Drawing,
 - 5)Linear Algebra and analytical geometry ,6) High Speed Aerodynamics
 - 7)Engineering drawing and projection

The teaching responsibilities include teaching, grading of midterms, quizzes, and assignments for a number of students classes

(Spring2017 – Fall 2017)

Teaching assistant in mechanical engineering, Ahram Canadian university for the following courses

- Courses:
 - 1)Mechanics Of Materials, 2) Measurement And Instrumentation , 3) Assembly Drawing

(Spring2017 – Fall 2017)

Teacher in noon academy for mathematics of high school

PROJECTS

July, 2016 – June, 2017

- Designing, manufacturing and testing of a Hybrid engine (Graduation Project)
Aerospace Engineering Department, Cairo University
Supervisor: Aly Abdel Fattah Hashem (Professor in the Aerospace Engineering Department, Cairo University, Egypt)

As a member of the team:

- Developed Matlab codes to study the transient analysis
- Studying the water hammer theory based on the method of characteristics
- Participated in the main code using Fortran (design point)

September, 2017 – June, 2017

- Autopilot design of an aircraft

As a member of the team:

- Generate matlab codes to study the nonlinear analysis of the airplane using RungKutta and Euler
- Design of controllers to control the motion of airplane during mission using SISO tool, PID tool, Simulink

May, 2017

- Flow over jukowski airfoil using computational fluid dynamics

December, 2017

- Design of turbofan engine Compressor design

December, 2017

- Stress analysis of a wing structure and making a vibration simulation (dynamic analysis) using FEMAP

December, 2016

- Design of an aircraft using rosam

May, 2016

- 1D design of an axial compressor and the estimation of its design performance (compressor map)

May, 2015

- Python project

Training

Summer 2014

Basic electronics training at communication Department, Faculty of Engineering, Cairo University

Summer 2014

Airplanes maintenance training at Egypt Air Company

Summer 2015

Airplanes maintenance training at The AOI's *Aircraft Factory at* Arab organization for Industrialization

Summer 2016

Training at NARSS - National Authority for Remote Sensing and Space Sciences

PERSONAL SKILLS

Mother tongues	Arabic
Other languages	English
Communication skills / managerial skills	<ul style="list-style-type: none">• Team work, Worked in various teams in volunteering work and technical teams• Leadership gained through technical work• Teaching skill, during my study in the university I helped many of my friends and colleagues with several subjects through the years of our education
Computer skills	<ul style="list-style-type: none">• Familiar with Linux and openfoam• Familiar with C++ programming• Coding very well on MATLAB• Some experience with simulation and analysis software (MATLAB, SIMULINK, SISO tool, PID tool)• some experience with FEMAP (NX NASTRAN)• some experience using Arduino• familiar with MS products (windows OS and office)• Beginner with python, Maple on MS visual Studio• Beginner with SolidWorks
Other skills	<ul style="list-style-type: none">• Self-learning : learnt on my own about Linux , openfoam and coding using MATLAB• Dealing with laboratory instruments e.g. electronics tools
Hobbies	Running, karate and football