

## EDUCATION

2015 –present **Bachelor's Degree in Mechatronics Engineering (undergrad)**

Ain Shams University

General: GPA: 3.56.

Projects: Night Patrol project:

An automated robot that can be motion controlled or made to follow a certain path used in malls, schools and large indoor areas.

It can detect intruders' faces using image processing and Opencv, on detection it sends immediately an E-mail with an attached photo of the intruder. ([preview](#)).

*Acquired skills:* Team work, coding on raspberry pi with opencv, integrating between raspberry pi, pi camera and arduino. PID control on motors.

Assembly production line:

consists of five stations (feeding, assembly, sorting and storing, handling, and dis-assembly that returns the parts to the feeding station). Parts were transferred by conveyor belts, slider-crank mechanisms, and robotic arms.

Other Projects:

- Heart-beat sensor. ([preview](#)).
- Marble track that sorts two different type of marbles. ([preview](#)).
- Shooting game developed using java. ([preview](#))
- Prusa i3 3D printer. ([preview](#))
- RC car powered by solar panels.

## AWARDS

- Second place in best proved 1<sup>st</sup> law of thermodynamics project (RC car powered by solar panels).

## EXPERIENCE AND TRAINING

20/4/2019 - 18/5/2019 **ASU racing team at Ain Shams university**

Recruited to solve suspension crisis in EVER'19 team due to team reformation. Designed a front double wishbone suspension and a pure-trailing arm rear suspension.

14/7/2018 - 13/8/2018 **Game development workshop in iHub**

Summer training: Developing a game by implementing OOP using java and using Netbeans as IDE.

16/7/2017 - 29/7/2017 **PAC (Petroleum Air Services)**

Summer training: Learning how to maintain hydraulic systems of helicopters, propellers, braking pads and wheels. Learned different types of aeroplane engines and different methods to detect cracks in plane parts.

## VOLUNTEER WORK

Jan 2013 - Feb 2013 **People to people international (PTPI)**

Fund raising member in the foundation. Helped in organizing event "من قلبه و روحه مصري" in New Ramses College.

## SKILLS

**Language(s)** - Arabic: Fluent, English: Fluent, French: Beginner, German: Beginner.

**Communication skills** Strong verbal and personal communication skills acquired from:  
- Excellent presentation skills acquired from making formal presentations.  
- Dealing with work environments through different hands-on training experiences.

#### Job-related skills

- **3D CAD Modeling:** Autodesk Inventor (Advanced level).
- **Programming:** MATLAB (Lower Intermediate level), C & Arduino C & Embedded C (Advanced level), RTOS using Keil (Intermediate level), Game development using java (Lower Intermediate level).
- **Dynamic Systems Simulation:** MATLAB/Simulink (Lower Intermediate level).
- **Finite Element Modeling and Simulation:** Ansys and Inventor (entry level).
- **PCB design and circuit simulation:** Proteus (Lower Intermediate level), fritzing (advanced level), Autodesk Eagle (Lower Intermediate level).
- **PCB fabrication** (Higher intermediate level).
- **Image processing and machine learning:** Raspberry pi, Arduino + matlab (Lower intermediate level), opencv (Intermediate level)

#### Other skills and awards

- The Associated Board of the Royal Schools of Music Certificates - Grade 1 & 2 Theory of Music.
- Professional gamer as a hobby.