

Rahma Sayed Saad

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Education

Bachelor, Systems and Biomedical Engineering Department- Cairo University [2014 - 2019], GPA: 3.35, Overall grade: Very good, Graduation project grade: Excellent

Skills

Hardware skills:

*Arduino Uno *Raspberry Pi
*ESP *8051 Microcontroller

Software skills:

* MATLAB, C#, C++ and Python
* Developing mobile applications using Java Android Studio
*Signal processing and graphics (OPENGL)
*SQL for database programming
*Unit testing using junit
*Source code management (GitHub)

*Agile

Language skills:

*English
*German

Personal skills:

Fast learner, Team Leadership, Hard worker, Well organized

Experience

Trainings:

*Artificial limbs Factory[2016]
*Kasr El Ainy Elfrinswe[2016]
*Siemens Healthineers (MRI, CT)[2017]
*International Medical Consultants (IMC) in Air Force Hospital[2018]
*Olympus company (Endoscopes)[2018]

Competitions:

*Award 1st place in Uhora competition by making **Pneu-Detector** that can be easily attached to the children body for early Pneumonia diagnosis.[2017]
*Participated in Microsoft Imagine cup competition.[2018]

Activities and Hobbies

*Member at Hardware team in IEEE Biomedical club[2017]

* Play racket

Projects

***Graduation Project:** A rehabilitation tool to minimize communication issues for disabled patients. Using Java android studio, we developed several mobile apps to help with pronunciation, hearing and object recognition.

***Small intestine endoscopy** to detect obstacles in the small intestine by using Arduino Uno with infrared sensor and small camera.

* **Infant Incubator** which includes device function, sensors and alarms controlled using Arduino Uno.

***Syringe pump** that works automatically depending on the required amount of the used liquid using Arduino Uno.

***Sleep apnea alert** to reduce the incidence of the heart diseases caused by SA, by measuring the flow of air expiration while the infrared sensor measures the pulse rate that controlled using Arduino Uno.

***Robotic arm** which using flex sensors in each finger to imitates specific motion using ESP module and building a model of a moving robotic arm using OpenGL library and C++.

***Three Elevator** ordered by using buttons and ESP module to get the closer one to the user with mobile and desktop application to choose floors.

* **CNC Plotter model** for drawing shapes in x-y plane using two stepper motors and one servo motor for the motion of pen in z-axis that controlled using Arduino Uno.

***3D Two rooms model** with one door and some objects for decoration using OpenGL library and C++.

***Binary classifier** that classify different EMG signals using MATLAB.

* **Function generator** to generate sine, square or triangular AC function signals using 8051 Microcontroller.

***Zero digital filtering** for biosignal with GUI using MATLAB.

***Sound equalizer** system and live sound recording with GUI using MATLAB.

***Serial receiver- transmitter** signals from one 8051 microcontroller to another.

***Pharmacy database** and GUI using SQL, C# and AWS, and **Pharmacy web server** for medicine online orders using PHP and HTML.

*Building a **database management** system for **operation rooms** using AWS, SQL and C++.

***Unit test** by using eclipse.

***Software Requirements Specifications** for mobile application.

***Spatial domain filters, frequency domain filters and Hough Transforms** on images using Python.

***Corner detection, active contours (Snake) and segmentation and clustering** algorithms using Python.

***Classify flower images** using Python.

*Member at Resala Charity Organization

* Ride bicycle