# Abdelrahman Abounida

### Mechatronics Engineer

Self-learning and hard work may be important skills for any successful person but for me they are my life



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## **WORK EXPERIENCE**

## **Junior Teaching Assistant** German University in Cairo

09/2018 - 01/2021

Achievements/Tasks

 I was responsible for helping students in circuits lab by solving any hardware or software problems that face them, and also teach them how to simulate their circuits using PSPICE software.

## Research Assistant in Robotics/AI

#### Fraunhofer

10/2022 - 03/2023

Achievements/Tasks

- Computer vision system for pin/ container detection at ports (Yolov7, Tensorflow)
- API Design and implementation (DRF)

## Software Design Lab tutor TUHH

10/2022 - 01/2023

Achievements/Tasks

• I am assigned to help students with any problem they face with their project. they are mainly using Java, GIt and Legos EV3 API

## Python Fullstack developer, Langchain, Chat GPT, AI

Upwork

02/2022 - Present

## **EDUCATION**

10/2021 - Present

## Bachelor of Mechatronics Engineering

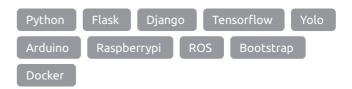
German University In Cairo

10/2016 - 07/2021 GPA 1.02 (A)

## Master of Mechatronics Engineering Hamburg university of Technology

GPA: 1.9

## **SKILLS**



## **PERSONAL PROJECTS**

#### Custom Pin Detection (Yolo)

Fine Tuning Yolov7 model to classify and detect port'containers'

#### Traffic System

Traffic System demonstration using couple of vehicles, NFR24L01, IR sensors, arduino, some other communication components

#### Robust Fiducial Markers Detection

Apriltag detection using opency (Raspberrypi)

#### Bittle ROS

Apriltag detection simulation using ROS-Gazebo Using Quadruped Robot (Bittle model)

#### Seagrass Supply Delivery (BlueROV)

Localization, path planning and control of underwater vehicle (bluerob) in both simulation (ROS-Gazebo) and real implementation

#### Arduino-Flask

 Serial communication between arduino and FLask to load sensor data and push it to the server

#### Robot Web view

Dashboard which open a web socket connection with ros using (Ros bridge server), React and Django to handle authentication and API Implementation

#### Lejos-EV3-Autonomous-Robot

EV3Leios robot maneuvering through no-loop maze to find a specific colorful wall with the latter dertermined by the user. (java-EV3Lejos API)

### **ACHIEVEMENTS**

- 1- One of the top 10 students (2nd) of the whole country (Secondary School)
- 2- Bachelor Engineering scholarship German university in Cairo

## **LANGUAGES**

English

German

Full Professional Proficiency

Limited Working Proficiency