

# Mahmoud Gamal

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## Education

### Fayoum University

BSC IN MECHATRONICS, ROBOTICS AND AUTOMATION ENGINEERING.

class of 2023

- Very good

## skills

**Knowledge:** Machine learning | Deep Learning | Data visualization | Object oriented programming| Embedded systems | Control systems

**Technologies and tools:**Python | C | scikit-learn | Seaborn |  $\text{\LaTeX}$  | Git | TensorFlow | Pandas | |MATLAB/SIMULINK| AVR microcontroller

**Languages:** Arabic (Native) and English (Fluent)

## Projects

**Heart disease classifier** : binary classification for the presence of heart disease . performed data exploratory analysis and data visualization using pandas and Seaborn. model training using logistic regression, decision tree, and random forest with sci-kit learn. Hyper parameter tuning using grid search.

**pyctrl** : developing open source python library for modern control, including functions such as: conversion between State Space and Transfer Function, solutions of state space systems, step response, pole placement, checking for stability, controllability, observability

**Manipulator** : Developed a 5 DOF manipulator, modeled the kinematic chain and calculated the inverse kinematics using Denavit–Hartenberg parameters, coded the GUI using TKinter, experimenting controlling methods.

**Security lock** : Security lock using ATmega16 interfaced with Hitachi LCD and keypad

## Work Experience

### Siemens energy-EGTA

TRAINEE

August 2020 - September 2020

- Summer Virtual training on Electrical Engineering (Renewable Energy, Automation, Power Plants)

## Extracurricular Activity

### IEEE FSB

ROBOTICS TEAM HEAD

Nov 2020- June 2021

- Founded the team, developed the curriculum and Tutored Robotics fundamentals and Arduino MCU

### Fab lab Fayoum

MACHINE OPERATION VOLUNTEER

Nov 2019-May 2021

- Technical support for the visitors

## Related courses

- Introduction to TensorFlow for AI, ML, and DL
- Introduction to machine learning in production
- Neural Networks and Deep Learning
- Improving Deep Neural Networks
- Convolutional Neural Networks
- Python for Data Science and Machine Learning Boot-camp(audit)
- MIT 6.034 (audit)