YASIEN ESSAM

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EDUCATION

Bachelors in Biomedical Engineering

Cairo University · Faculty of Engineering

2018 – present(**3.4 GPA**)

- **Undergraduate Courses** : Machine Learning, Computer Vision, Computer Graphics, Probability, Statistics, Calculus, Linear-Algebra, Digital Signal Processing, Data Structures, Algorithms, Databases, Embedded Systems.

INTERNSHIPS AND EXPERIENCE

Computer Vision Intern

The Sparks Foundation

Mar 2022 - Apr 2022 Remote

- Implement optical character recognition which extract printed or handwritten text from a photo.

Internet of Things Instructor

STP

Aug 2020 –May 2021 Cairo,Egypt

- Designed and prepared the academic material in coordination with the rest of the team
- Made more than 10 small projects with participants.
- Design and lead competition for the final project which was a smart parking system.

SKILLS

- Languages: C, C++, Python
- Data Science: Tensorflow, Numpy, Pandas, Sci-kit-learn, Matplotlib
- Software Engineering: OOP, Data-Structure, Algorithms, Data-Base
- Back-End: Flask SQL
- Front-End: HTML CSS JavaScript
- Image Processing: Open-CV

VOLUNTEERING

Open Source Volunteer

Neuromatch

Mar 2022 - Jun 2022 remote

- Help with flagging copy-right violations in the Deep Learning course content

Team Lead

Resala Charity Organization

Jul 2016 - present Cairo,Egypt

- My main work was to lead my team to help build and renovate mosques and schools.; in addition to, all the extra activities such as fundraising, PR, content creating.
- Build a concrete Team and process.
- Setting KPIs for and monitoring performance for the whole team.

PROJECTS

Digital Signal Processing

- **Sound Equalizer and Instruments player**
  GUI gives you the ability to play and Equalize any one channel wav audio file and play 3 different instruments.
  Tools: PyQt5, PyQtgraph, numpy, scipy
- **Interpolation Curve Fitting App**
  GUI for Curve fitting, interpolation and it can generate error map for the interpolation.
  Tools: PyQt5, matplotlib, pandas, scipy, numpy
- **Signal Sampling Illustrator**
  GUI illustrating how the sample theory work, applying Nyquist sampling and it can also generate signals with various freq, amplitude.
  Tools: PyQt5, numpy, PyQtgraph, pandas

Computer Vision

- **Image Filter**
  GUI apply various filters on image and make histogram equalization
  Tools: PyQt5, OpenCV
- **Car Plate Character Recognition**
  System can read car plates to be used in a smart city as part of Machathon 3.0 Competition
  Tools: OpenCV, pytesseract, matplotlib

Computer Graphics

- **3d-Medical Volume Rendering**
  3D medical volume rendering web application built with that supports volume rendering with multiple presets and marching cubes
  Tools: React, JavaScript, vtk-js

Machine Learning

- **Diabetic Prediction**
  Predict whether the patient has diabetes or not using PIDD dataset
  Tools: seaborn, numpy, matplotlib, pandas

IoT

- **Smart Home**
  Consist of home lighting system, temperature system, fire system and motion detect system, is managed by Arduino and Android phone
  Tools: Arduino, Bluetooth-Module, Relay Module,Some basic sensors.
- **Smart Parking System**
  Gate control system and Slots control system, is managed by NodeMCU and Mobile App
  Tools: NodeMCU, Blynk, Relay Module,Some basic sensors.

CERTIFICATES

- Deep Learning Specialization: Coursera
- CS50 : Harvard College