

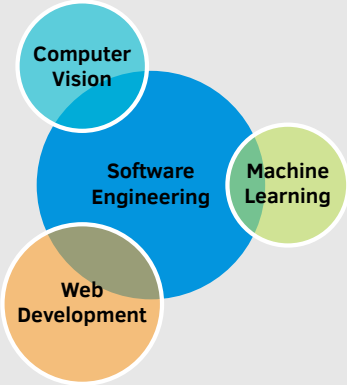
Ahmed Mohamed

Software Engineer

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Skills

Overview



Tools

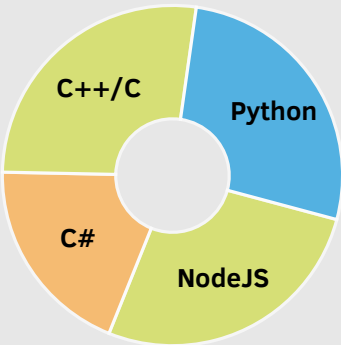
TensorFlow PyTorch OpenCV
Docker Kubernetes Django

MySQL MongoDB

NumPy Matplotlib Pandas L^AT_EX

OOP, git, Agile Methodologies

Programming



Interests



Education

2015 - 2020 Bachelor of Science Cairo University, Faculty of Engineering
Major in Computer Engineering

Experience

- 10/20'- Machine Learning Engineer - Freelance Upwork
 - Development of complete software of plant disease classification and growth tracking.
 - Development of software to set up thermal camera color spaces using C++ and OpenCV.
 - tools: Python, TensorFlow, tfx, Docker, Kubernetes, C++, OpenCV.
- 01-04/21' Computer Vision Researcher - Part Time Cairo University
 - Developed a PointNet based software pipeline that produces clusters of objects-of-significance of a power plant point cloud, and then classifies these objects into four main classes.
 - Submitted a paper of the proposed pipeline and software to Remote Sensing journal.
 - tools: Python, Point Cloud Library (PCL), git.
- 01-04/21' Software Engineer - Contract EGYCERT
 - Developed a complete management system for EGYCERT business operations.
 - Integrated the system with a cross-platform mobile application.
 - tools: Python, Django, GraphQL, REST API.
- 01-04/21' Robot Process Automation Developer - Full Time Sumerge
 - Automated business, functional and team-related processes using Python scripts and AutomationAnywhere.

Internships

- 10-09/20' Computer Vision Engineer ONE Lab Egypt
 - Designed and implemented a reliable and robust computer vision pipeline based on a single monocular camera for an autonomous racing vehicle.
 - Implemented the perception pipeline; an object detection module integrated with a PNP algorithm to detects objects' locations in 3D map.
 - tools: Python, PyTorch, ROS, rviz, git, CMake.
- 08-10/20' Software Engineer Egyptian Ambulance Organization
 - Implemented a web-application of Egyptian Ambulance CAD desktop application.
 - Optimized and increased the accuracy of the suggestive algorithm of finding nearest ambulance to the emergency case.
 - tools: NodeJS, React, SQL, Distance Matrix API.
- 06-09/18' Software Engineer Egyptian Ambulance Organization
 - Development of automated surgery waiting list for egyptian public hospitals.
 - tools: Laravel, HTML, CSS, PHP, MySQL.

Projects

2021 **Power Plant Point Cloud Classifier || Python**

- As a part in PhD thesis, worked on the development of a software that processes a point cloud, cluste it into meaning clusters and then detects objects of significance from a power plant point cloud. Paper is currently being reviewed by Remote Sensing Journal to be published.
- **tools:** Python, PyTorch, PointNet, OpenCV.

2021 **EGYCER Management System || Python**

- Created a web application that organizes the entire business processes of EGYCERT.
- **tools:** Python, Django, GraphQL.

2021 **Agy.ai || Python**

- An AI web application to classify plants diseases and track their growth.
- **tools:** Python, PyTorch, OpenCV, Flusk.

2019 - 2020 **AutoRace || Python**

[GitHub Repo](#)

- Implementation of a state-of-the-art Robotics Software pipeline of an autonomous racing vehicle.
- **tools:** Python, PyTorch, ROS, rviz, git, CMake, computer vision, deep learning.

2020 **AI Go Board Game || Python**

[GitHub Repo](#)

- AI agent for Go board game based on Deepmind's AlphaGozero.

2018 - 2019 **OCR for Arabic Scripts || Python**

[GitHub Repo](#)

- Optical character recognition of arabic script images and output scripts as text.

2018 - 2019 **Embedded Software of Electric Vehicle || C++**

[GitHub Repo](#)

- The 2019 electrical vehicle embedded system code for Cairo Uni Racing Team.
- **tools:** C++, C, Assembly, Makefile, git, ARM controllers, CAN protocol.

2018 **Automated Surgery Lists || PHP**

[GitHub Repo](#)

- A web application to automate surgery waiting lists of egyptian public hospitals.
- **tools:** Laravel, PHP, CSS, HTML, MySQL

2017 **Dieter Application || C#**

[GitHub Repo](#)

- Health and Dieting Windows Forms Application with lots of useful features.