Mahmoud Gamal
MACHINE LEARNING ENGINEER

Hadayek El-Maadi, Cairo
(willing to relocate)

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Education

Fayoum University
BSc in Mechatronics Engineering. *Spring 2023*
- Grade:3.0 (Very good)

skills

Knowledge: Machine learning | Deep Learning | Image processing | Data visualization | Object oriented programming| Mechatronic systems

Technologies and tools: Python | Bash | MySQL | Scikit-learn | Seaborn | LaTeX| Git | TensorFlow | Pandas | openCV | MATLAB/SIMULINK

Languages: Arabic (Native) and English (Fluent)

Projects

ADAS perception module(Graduation project) :
- Implemented an image processing pipeline for lane detection using OpenCV.
- Collected road data for instance segmentation, developed code to convert it to the appropriate YOLO label format, and fine-tuned YOLOv5 on the custom dataset. Additionally, performed object detection by collecting cars and traffic signs data,fine-tuning YOLOv5 on the custom dataset, and successfully deployed it on Raspberry Pi.

Automated fresh fruit sorting system :
- Trained a Convolutional Neural Network model that classifies the fruit and its condition (e.g., rotten oranges or fresh apples).
- Deployed the model using TensorFlow Lite on Raspberry Pi, which controls a servo that removes the rotten fruit.

Heart disease classifier : Binary classification for the presence of heart disease.
- Conducted data exploratory analysis and data visualization using pandas and Seaborn.
- Trained models such as logistic regression, decision tree, and random forest with scikit-learn and hyperparameter tuning using grid search.

Pyctrl : Developed an open-source Python library for modern control, offering functions such as conversion between State Space and Transfer Function, solutions of state space systems, step response, pole placement, checking for stability, controllability, observability.

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*
- Provided technical support for the visitors

Related courses

Machine Learning Data Lifecycle in Production
Introduction to machine learning in production

Neural Networks and Deep Learning
Improving Deep Neural Networks

Convolutional Neural Networks(audit)
ST121:probability and statistics (audit)
Stanford CS229: Machine Learning (audit)