

Mahmoud Gamal

Data Analyst

Maadi street 9, Cairo

☎ (+20)1098255987 | ✉ mg1488@fayoum.edu.eg | 📱 mgama1 | 🛂 Military status: Exempted

Education

Fayoum University

BSC IN MECHATRONICS ENGINEERING.

2018- 2023

- Grade:3.0 (Very good)

skills

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

Technologies and tools: Python | Bash | MySQL | Scikit-learn | Seaborn | ~~TeX~~ Git | TensorFlow | Pandas | openCV | MATLAB/SIMULINK | AVR | Raspberry pi

Languages: Arabic (Native) and English (Fluent)

Projects

OGallery :

- Developed an open-source gallery app for Linux with advanced search capabilities, image viewing, and editing functionalities.
- Trained a MobileNet classifier that categorizes and indexes images, improving image organization and search.
- Implemented robust searching features using Levenshtein distance for misspelling correction .
- Optimized image loading by implementing a cache mechanism, resulting in faster image loading times and improved overall performance, with specifications aligned with freedesktop.org standards.

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.

Heart disease classifier :

- 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.

Articles

- **Understanding colors in visual storytelling: how to extract color palettes:** Explores how colors shape visual storytelling with a hands-on guide to extracting image palettes using k-means clustering in Python.
- **Hiding in plain sight: An introduction into Steganography:** Explores how steganography hides messages in images using bit manipulation in Python.

Datasets

- 🟡 created a 100% synthetic **dataset** of Egyptian ID cards where names, birthdays, ID numbers, and other details are randomized. Generated headshots using thispersondoesnotexist that utilizes styleGAN2.

Work Experience

Samsung Electronics Egypt

INTERNSHIP

Aug 2023 - Oct 2023

- optimization and maintenance of assembly line AGVs

Siemens energy-EGTA

TRAINING

Aug 2020 - Sept 2020

- Summer 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

- Provided technical support for the visitors

Related courses

ML Data Lifecycle in Production | Intro to ML 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)