Omar Salah Hemied

Teaching & Research Assistant

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Profile

I grow to learn and I believe artificial intelligence makes amazing things every day and love to explore new places and try new things all the time. I'm interested in building Machine Learning systems that help and grow for community and industry and I aspire to apply what I learn in machine learning and artificial intelligence in general in the service of society and humanity in general.

Professional Experience

Teaching & Research Assistant, 03/2023 – present
Faculty of Computer and information, Assiut University Egypt
Responsibilities:

- Teaching courses to undergraduate students in a creative manner to make students like the matter,
- Connecting the course I taught with industry and how we can use these in companies
- Evaluating and grading examinations, assignments, and record grades.
- Follow up with students on graduation projects and help them solve their problem

Courses I have taught:

- Machine Learning
- Software requirement and analysis
- fundamental programming language (C++)

Machine Learning & computer vision engineer, 08/2022 – 03/2023
Aiactive Technologies · Part-time
Developing computer vision and machine learning models using deep learning for traffic analytics:

- working in deep learning models for object detection and classification.
- Doing A lot of optimization Techniques to Handle the big models such as ONNX.
- Deploy AI models On Edge like Ressparry pa and Axis Camera.
- working on computer vision projects with C++ and python
- working with MLClear to handle the ML Pipeline (MLOPS).

Artificial Intelligence (AI) Content Creator, *Ai-cases.com - Part-time* 09/2021 – 12/2021
United States
We're built AI-Cases.com to help anyone easily understand how to apply AI in their work through a use-case first approach. We bring the most essential use-cases per domain, and help you gradually understand them via three phases:

- Quick Intro: the problem, solution, and how AI is used in under 2-5 minutes.
- Know More: case studies, deeper explanations, and technical introductions.
- Do data sets, notebooks/code, tutorials, research papers, technical videos/articles, and off-the-shelf products.

Use-Cases in Retail, manufacturing, Supply Chain, Banking , Health, Education, and Insurance

Machine learning & Computer vision engineer, *Aiactive Technologies · Internship* 07/2021 – 12/2021
Developing computer vision and machine learning models using deep learning for traffic analytics: Egypt

- working in deep learning models for object detection and classification.
- Doing A lot of optimization Techniques to Handle the big models such as ONNX.
- Deploy AI models On Edge like Raspberry pi and Axis Camera.
- working on computer vision projects with C++ and python

Deep Learning & Medical image analysis Research, *Part-time - Assiut University* 03/2021 – 06/2021
Developing A Big Data Platform For Mapping The Spread Of The Pandemic To Track The Diffusion Of The Pandemic In The Time And Geography That Can Help Doctors And Decision Maker, This Platform Contains A Lot Of Technologies Such As Text Analyzer, Bi-Lingual Medical Chatbot, Data Analytics & Visualization, Big Data Management, Medical Imaging Analysis. And This Project Is Funded By Science, Technology & Innovation Funding Authority (STDFA). Egypt
My Role In This Large Project Is As A Medical Imaging Analyzer On The Real Ct-Scan From Assiut University Hospitals For Patients That Suffers From Covid-19 I Was Using The Deep Learning And Classical Machine Learning Techniques In Done My Role.

Education

Master Degree of Computers and Information - Software Engineering, 2022 – present
Assiut University Egypt

Bachelor Degree of Computers and Information - Software Engineering Department, 2017 – 2021
Assiut University , With General Grade (B+) (V.Good With Honor) CGPA (3.52 out of 4) Egypt

Publications

A COVID-19 Visual Diagnosis Model Based on Deep Learning and GradCAM., 03/2022
Institute of Electrical Engineers of Japan. Published by Wiley Periodicals LLC.

Improved Deep Learning Approach for Covid-19 Recognition in CT-Images, 07/2022
Journal of Theoretical and Applied Information Technology (JATIT)

Deep learning algorithms to improve COVID-19 classification based on CT images, 10/2022
Institute of Advanced Engineering and Science (IAES)

Courses

Machine Learning Nanodegree, *from Udemy*

Deep Learning Specialization, *from Coursera*

AI for Medical Diagnosis, *from Coursera*

Browser-based Models with TensorFlow.js, *from Coursera*

Custom Models, Layers, and Loss Functions with TensorFlow, *from Coursera*

Custom and Distributed Training with TensorFlow, *from Coursera*

Image processing in python, *from datacamp*

AI Programming with Python Nanodegree, *from Udacity*

Ai in Healthcare, *from Udacity*

Projects

Object Detection for Football Players, *Tools : Python , NumPy , Yolov8 , Matplotlib*

Face Mask Detection at Real-time, *Tools: Python , NumPy , Matplotlib , OpenCV , TensorFlow , Keras.*

Brain Tumor large scale detection for MRI slices With GradCAM,
Tools: Python , NumPy , Matplotlib , OpenCV , TensorFlow , Keras , Transfer Learning.

Segmentation Cancer cells,
Tools : Python , NumPy , Matplotlib , OpenCV , TensorFlow , Keras , U-net Architecture

Diagnosis of Covid-19 From Chest X-ray Images Using Transfer Learning, *Tools : Python , NumPy , Matplotlib , OpenCV , TensorFlow , Keras , Data Augmentation , Transfer Learning , Medical Images (Chest x-ray)*

Diagnosis Covid-19 Brower-based using Tensorflow.js (AS Deploy ML model),
Tools : Java Script , TensorFlow , Keras , Transfer Learning

Diagnosis Retinal optical coherence tomography (OCT) Using Deep Learning,
Tools : Python , NumPy , Matplotlib , OpenCV , TensorFlow , Keras , Transfer Learning

Build Machine learning models from scratch, *Tools: Python, NumPy , Pandas*

Organizations

Google Developer Groups Assiut, *One-of-Founders , Co-Lead* 12/2021 – present

Google Developer Student Clubs - Assiut University, 08/2020 – 01/2023
Co-Founder , Machine Learning Head and Mentor

Microsoft Learn Student Ambassador 09/2021 – present

Skills

- **TECHNICAL SKILLS**

- LANGUAGE PROGRAMMING
  Python , C++, C#, Java.
- Libraries
  TensorFlow , Keras , NumPy , pandas , matplotlib , OpenCV , scikit-learn ,Docker , Transformers.
- GENERAL
  Data Structures, Algorithm, OOP, Design Pattern, Probability and Statistics
- TOOLS :
  GitHub , Azure , GCP
- OTHER
  Html , CSS ,Css3 , Bootstrap , SQL Server,SQLite , MySql , SQLAlchemy, Flask

Personal Skills

- Research
- Hard Work
- Excellent Communication
- teamwork
- Leadership Skills
- Creative
- Learn Smart

Languages

- Arabic
- English