

Karim Ayman

DATA SCIENTIST

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Profile Summary

Computer Science graduate with a major in Artificial Intelligence and was among the top-ranking AI students in the faculty. Have worked on complex Machine Learning projects including training with deep neural networks for NLP, Computer Vision and Reinforcement Learning tasks. Looking for a good position as a Data Scientist\AI engineer.

Experience

SELF EMPLOYED | Computer Vision Algorithm Engineer 06/2024 - PRESENT

- Developing LIVE gameplay stats tracker flutter app using OpenCV.
- Collected & annotated gameplay data using VGG IA & CVAT.
- Experimented with 3D ConvNets for Temporal Action Localization & YOLO fine-tuning.

Education

London South Bank University, BSc. Informatics & Computer Science 2024
Major: Artificial Intelligence | Grade: First Class Honors

The British University in Egypt, BSc. Informatics & Computer Science 2024
Major: Artificial Intelligence | Grade: Very Good

Training & Courses

- Power BI 4-Months Intensive Code Camp Program | ITI 02/2025 - PRESENT
- Flutter & Dart: Complete Guide | Udemy PRESENT
- AI Level 3 (CV, MLOps, NLP, Generative AI) | Orange Digital Center
- Google Cloud Computing | Telecom Egypt
- Ethical Hacking Bootcamp | Udemy
- Ethical Hacking from Beginning to Advance | Telecom Egypt
- Artificial Intelligence | Telecom Egypt

Technical Skills

- Deep Learning: PyTorch, Tensorflow
- Computer Vision: OpenCV, FFMPEG, PIL, Ultralytics, IPython
- Natural Language Processing: NLTK, Transformers, Regex, Spacy, BERT, GPT
- Machine Learning: Pandas, Sci-kit Learn, Numpy, Matplotlib, Seaborn
- Reinforcement Learning Algorithms: DDPG, DQN, Actor-Critic, PPO
- Programming Languages: Python, C++, Java, SQL, C, Dart
- Data Science: VSCode, Jupyter, Beautiful Soup, Requests

Projects

- **Variational Auto-Encoder for image generation on Fashion MNIST** 02/2025
- **Arabic Sentiment Reviews Classification** 02/2025
 - Performed heavy text cleansing using regex.
 - Used AraBERT text tokenization and implemented sentiment classification using RNN, bi-directional RNN, LSTM & bi-directional LSTM.
 - Fine-tuned AraBERT & multilingual GPT-NEO on the dataset.
 - Containerized the whole notebook environment with Docker.
- **Military assets objects detection with YOLO11n** 01/2025
- **Multi-Agent Reinforcement Learning for Cooperative Control in Wildfires (GP)** 10/2023-06/2024
 - Created a complex highly stochastic 2D wildfire environment.
 - Simulated learning of heterogenous agents using attention-based centralized critic MADDPG.
- **Poem generation by fine-tuning Hugging Face GPT-2** 04/2024-05/2024
- **Facial Emotion Recognition with deep learning using Vision Transformer** 04/2024
- **Data classification & regression with Machine Learning techniques** 10/2023-12/2023
- **Q-Learning algorithm implementation for autonomous 2D agent** 11/2023-12/2023
- **Bus transportation database system design & implementation in Oracle server** 10/2023-12/2023
- **Job site scraping & Deriving data insights** 02/2023-05/2023
- **Bunker: A 2D game level in Unity with C#** 10/2022-12/2022

Languages

- **Arabic: Native**
- **English: Fluent**