Karim Ayman Mohammed

AI Engineer

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Profile

Computer Science graduate with a major in Artificial Intelligence. Have worked on complex Machine Learning projects including training with deep neural networks for NLP, Computer Vision and Reinforcement Learning tasks. Seeking a good position as a Data Scientist\AI engineer.

Experience

Self-Employed   **Jun 2024 – Aug 2025**
Solo-developer of NiceShot AI (not officially trademarked)

Developed an event detection tool for gameplay analytics, powered by computer vision, that automatically detects, tracks, and extracts key gameplay events from raw footage. The tool simplifies the video editing process, saving time and effort associated with scrubbing hours of gaming footage.

To build this tool, I collected and annotated gameplay data using VGG IA and CVAT for object detection and tracking. I experimented with 3D ConvNets for Temporal Action Localization and fine-tuned YOLO with the Deep SORT tracker to improve event accuracy and tracking. For video processing and event extraction, I integrated OpenCV with FFMPEG. The tool is wrapped in a simple, user-friendly GUI for easy interaction.

Currently, I am offering gameplay clip extraction as a freelance service, helping clients automate highlight generation. Also, I am open to exploring collaboration opportunities with gaming studios, streamers, and other content creators who may be interested in using or further developing this tool.

Information Technology Institute   **Mar 2025 – June 2025**
Power BI Trainee

Projects:

- **[Graduation Project] Examination System**

  Assisted in designing and implementing a relational database schema to manage examination data, including student records, results, instructors, exams, tracks, courses, and departments. Helped develop stored procedures and optimized SQL queries to automate data operations and ensure integrity. Also contributed to building a responsive web app using Python (Flask), HTML, and CSS for CRUD operations on the database. Additionally, I created Power BI dashboards to visualize student performance on freelancing tasks, certificate topics, and hiring trends by companies, utilizing DAX for custom measures and KPIs.

Orange Digital Center   **Jan 2025 – Feb 2025**
AI Level 3 Intern

Projects:

- **Military assets objects detection with YOLO11n**

- **Arabic Sentiment Reviews Classification**

  Performed extensive text cleansing using regex for Arabic sentiment analysis. Utilized AraBERT for text tokenization and implemented sentiment classification models using RNN, bi-directional RNN, LSTM, and bi-directional LSTM. Fine-tuned AraBERT and multilingual GPT-NEO on the dataset to improve model accuracy. The entire environment was containerized using Docker for easy deployment and scalability.

- **Variational Auto-Encoder for image generation on Fashion MNIST**

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

Projects:

- **[Graduation Project] Multi-Agent Reinforcement Learning for Cooperative Control in Wildfires**
  - 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**
- **Facial Emotion Recognition with deep learning using Vision Transformer**
- **Data classification & regression with Machine Learning techniques**
- **Q-Learning algorithm implementation for autonomous 2D agent**
- **Bus transportation database system design & implementation in Oracle server**
- **Job site scraping & Deriving data insights**

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
- Reinforcement Learning Algorithms: DDPG, DQN, Actor-Critic, PPO
- Programming Languages: Python, C++, Java, SQL, C, Dart
- Data Science: Beautiful Soup, Requests, Matplotlib, Seaborn, Numpy

Courses

- **Google Cloud Computing | Telecom Egypt**
- **Ethical Hacking Bootcamp | Udemy**
- **Ethical Hacking from Beginning to Advance | Telecom Egypt**
- **Artificial Intelligence | Telecom Egypt**

Languages

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

Additional Information

- **Military Exempt**