Omar Ayman Elgemaey

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Profile

AI Engineer with experience in building machine learning and deep learning models. Skilled in Python, TensorFlow, PyTorch, and data handling tools. Worked on projects involving computer vision, NLP, and predictive analytics. *Experienced in training, testing, and deploying models for real-world applications*. Fast learner, problem-solver, and team player.

Education

9-Month Professional Diploma, Artificial Intelligence and Machine Learning Track   10/2024 – 06/2025
- (ITI) Information Technology Institute ,(MCIT) Ministry Of Communications And Information Technology

Faculty of Engineering - Mansoura university   2019 – 2024
- Bachelor in Electronics and communication
- Cumulative Grade : Very Good with honor
- Graduation Project Grade : Excellent

Projects

D.E.B.R.I.S (detection and exploration bot for rescue, investigation and survival) ⬀

- Designed and implemented a convolutional neural network (CNN) to detect human presence detection, achieving detection accuracy of over 90%.
- Designed a real-time object detection system utilizing YOLOv8 on an ESP32 camera, achieving high accuracy in dynamic environments.
- **Technologies Used:** YOLOv8, Ultralytics, ESP32-CAM, Python, OpenCV.

AI-Career-Assistant ⬀
- Developed an AI-powered career assistant that parses job descriptions, matches resumes, and generates tailored cover letters using a multi-agent system.
- **Technologies Used:** CrewAI, Hugging Face Transformers , OpenAI API , Streamlit .

Segmentation of lungs MR-images using U-NET ⬀
- Implementation of U-net layers using TensorFlow and keras.
- Segmentation of Lungs MR-images with 98% score on test data
- **Technologies Used:** U-Net , TensorFlow , Keras , NumPy , OpenCV, Matplotlib

Forecasting Sales for Rossman Store
- Performed exploratory data analysis (EDA) and implemented time series forecasting using statistical and machine learning models, including **ETS, ARIMA, Prophet,** and **Random Forest.**
- **Technologies Used:** Statsmodels , Facebook Prophet , Scikit-learn , XGBoost , Catboost

Credit Card Customer Segmentation ⬀
- Cluster credit card clients into segments using unsupervised learning, Comparing results of different techniques (K-means, GMM, DBSCAN).
- **Technologies Used:** Scikit-learn (Clustering, Anomaly Detection and, Dimensionality Reduction), t-SNE , PCA .

Prediction-of-Obesity-Risk ⧉
- Trained and evaluated multiple models for obesity risk prediction; best performance by tuned LGBM (91% accuracy on Kaggle)

Technical skills

Programming languages

- Python , C , C++

Frameworks and libraries

- Scikit-Learn , Pandas , NumPy , Tensorflow , PyTorch , OpenCV , Matplotlib , Seaborn , Plotly , FastAPI , Streamlit / Dash , SpaCy , Hugging Face Transformers , Spark.

Tools

- SQL , NoSQL , Power BI , Pyspark , Linux , Git , Docker , Hadoop , MLflow , Kafka .

Courses

Associate Data Scientist , Datacamp ⧉   2025
- 23 Courses   , 11 Projects

Deep Learning Specialization, Coursera (online)   2023

Machine Learning Specialization, Coursera (online)   2023

CISCO CCNA (Mansoura university)   2021

Internships

Mentronix   07/2023 – 09/2023
- Gained hands-on experience in PCB design using Siemens PADS   Cairo
  Professional.

Egyptian Electricity Transmission Company   07/2022 – 09/2022
- Develop hands-on experience in the design, testing, and
   maintenance of electrical systems, with a focus on safety and
   efficiency.

Extracurricular Activities

Target team Mansoura, team member   2019 – 2023
- Participated in charity, event planning, and voluntary activities

Enactus, Mini Dollars Project member   2017 – 2019
- Joined entrepreneurship-focused community project.

Personal Skills

 Leadership | Time Management | Problem-Solving (Proficient) |Creativity |Teamwork
Communication | Adaptability | Critical Thinking | Collaboration | Decision-Making

Languages

- Arabic (Native)   • English (Fluent)