Manar Ramadan

AI and Machine Learning Engineer

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
Education

9-month professional diploma in AI and ML program,   10/2023 – 06/2024
Information Technology Institute, Alexandria Branch

Bachelor's degree in computer science,   09/2018 – 07/2022
Faculty of information technology and computer science, Mansoura university

Technical Skills

Programming Languages:
Python, C++, C

Visualization Tools:
 Plotly, Dash, Power BI , Tableau

Deep Learning:
NLP, Computer Vision, Recommender systems,GenAI (
TensorFlow, PyTorch, OpenCV)

Robotic process automation(RPA)
UIPath studio

Data Analysis & Machine Learning :
Scikit-Learn, Surprise, Pandas, Numpy

Database Technologies:
SQL, NoSQL using MongoDB

Big Data:
 spark, Pyspark, hadoop, kafka, Hive

Other
web scraping, AWS cloud, Linux, Trello, Jira, Git, GitHub

Projects

SneakPeek 🔗
Developed an AI-powered online exam monitoring platform integrating facial recognition, eye movement tracking, voice detection, and object detection using frameworks like **YOLOv5**, **MediaPipe**, **OpenCV**, and **Flask**. Automated question grading and video storage ensure enhanced exam security and streamlined proctoring.

FitBot 🔗
Utilize Retrieval-Augmented Generation (**RAG**) and Large Language Models (**LLMs**), such as **LangChain**, to develop a specialized chatbot for fitness and healthcare.

Survana 🔗
Developed 3 sentiment analysis models as part of a survival analysis project aimed at determining the viability of new technologies. The objective was to gather sentiment from social media and tech news using **BERT** for text data, **SVM+hog** for video data, and **CNN** for audio data, achieving high accuracy in sentiment classification.

FLY EYE(Image Captioning) 🔗
Developed a system that automatically generates descriptive captions for images using **NLP** and CV techniques(pre-**DenseNet201** trained model and **LSTM**) and converted text to speech.

Head Pose Estimation for Videos 🔗
Developed a facial landmark detection and pose estimation system using **Mediapipe** and **scikit-learn** libraries, achieving accurate facial orientation prediction. Leveraged FaceMesh for landmark detection, **SVR** for pose estimation, and **PCA** for feature extraction.

Home Credit Default Risk, *Kaggle competition* 🔗
Engineered features and developed **random forest** models using alternative data to predict loan repayment abilities, enhancing financial inclusion. Evaluated model performance using **AUC**.

CineMate(Cinematic Recommender) 🔗
Developed a comprehensive movie recommendation system using the MovieLens dataset. Implemented user and item recommendation pages with interactive features. Utilized tools such as **Dash**, **Pandas**, and **Neural Collaborative Filtering**.

3C(Credit Card Data Clustering) 🔗
Performed customer segmentation analysis on credit card data using **K-means clustering** and **DBSCAN**. Conducted data preprocessing and exploration, determined optimal clusters, and identified customer groups with similar spending behaviors for targeted marketing strategies. Visualized insights to facilitate data-driven decision-making.

IMDb Analysis 🔗
Conducted thorough exploration, preprocessing, and analysis of the IMDb dataset, resulting in a published **recommendation system** using machine learning techniques, showcased on the official Plotly website. Leveraged **Plotly** Dash for interactive dataset visualization, offering insightful recommendations generated by the system.

Additional Info

CUSTOMER SERVICES nova cosmetics clinics   09/2022 – 03/2023
 - Handled customer complaints and provided appropriate solutions and alternatives within the   Alexandria, Egypt
   time limits. Also, increased the profit margin by exceeding the daily target.

Languages

Arabic (Native) • **English** (Fluent)