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AMR M.ABDALBADEE

Artificial Intelligence Engineer

@ amrabdalbadee@gmail.com @ s-amrmooohamed@zewailcity.edu.eg
📍 Alexandria/Cairo, Egypt 🔗 amrmooohamed in amr-abdalbadee

☎ +2 0109 8643 363
Upwork

SUMMARY

- Highly skilled AI professional with a strong background in machine learning and deep learning algorithms.
- Extensive experience in developing and implementing AI models for various applications, including computer vision, natural language processing, and predictive analytics.
- Demonstrated ability to analyze complex data sets, create Visualizations, design efficient AI architectures, and optimize models for performance and accuracy.
- Constantly staying updated with the latest advancements in the field of AI through continuous learning.

EDUCATION

AI and Machine Learning Training Program at Information Technology Institute (ITI)

Professional Diploma (9 Months) - 🔗 Code

📅 Oct '22 - June '23 📍 Alexandria

University of Science and Technology at Zewail City

BSc. in Communication and Information Engineering

📅 Aug '15 - Feb '21 📍 Giza, Cairo

TECHNICAL SKILLS

- **concepts:** OOP | Data structures | Algorithms | optimization techniques | probability and statistics | ML | DL | CV | NLP | Reinforcement learning
- **Programming languages:** Python | C++ | C | MATLAB | C#
- **ML algorithms:** logistic regression | decision trees | SVM | KNN | Ensemble methods | PCA | naive bayes
- **Deep learning algorithms:** FNN | CNN | RNNs | autoencoders | GANS | Transformers | LLMs
- **ML/DL libraries:** Tensorflow | keras | pytorch | sickitlearn | huggingface | Opencv
- **Reinforcement learning:** gym | stable baselines | FinRL
- **Data Analysis:** Pandas | Numpy | Scipy
- **Data Visualization:** Matplotlib | seaborn | plotly | Powerbi
- **Cloud Services:** AWS | GCP
- **Big Data libraries:** Spark | Hadoop | Kafka
- **Data-querying:** SQL | NOSQL(MongoDB)
- **Quant-space:** Quantconnect | Quantopian
- **Other:** Agile | Git | Linux | Django | GPT-3.5 Turbo | OCR | ONNX | TensorRT

PERSONAL SKILLS

- Mathematics and Logic | problem formulation | presentation | Communication
- Leadership | team-work | Critical Thinking | Time-management

EXPERIENCE

AI ENGINEER

Danu

📅 Aug 22 - Present 📍 Remote

- bring liquidity to illiquid markets
- Gathering NFT's Data from Multiple API's
- Analysis of NFT's Traits like desirability score and rarity score.
- research NFT and blockchain technology potential applications.
- Building and tuning Machine/Deep learning Models for NFT's.

QUANT DEVELOPER

PowerTech Funds

📅 May - Aug 22 📍 Remote

- dealing with multiple API's for retrieving data and sending orders to brokers like Interactive Brokers.
- Assisting in Backtesting and Live Implementation of trading strategies.
- researching potential alpha in different markets.

SOFTWARE ENGINEER

Jumeriah Egypt For Trading and contracting

📅 Mar 22 - May 22 📍 Alexandria, Egypt

- Working on Building An ERP (Enterprise Resource Planning) for the company using C# and SQL
- Creating Reports and Dashboards from ERP system data.

MACHINE LEARNING INTERN

Research Project - 🔗 Code

📅 Aug 21 - Feb 22 📍 Giza, Cairo

- research potential applications of using limit order book data in finance.
- applying Reinforcement learning to do HFT and Portfolio allocation.

AI Freelance Engineer

Upwork

📅 Mar 20 - Present 📍 Remote

- Developed and optimized end-to-end AI Systems/Solutions.
- maintaining a high job success score which reflects clients satisfaction with my AI solutions.

CERTIFICATIONS

- [Python3 Programming Specialization](#)
- [Deep Learning Specialization](#)
- [TensorFlow in Practice Specialization](#)
- [TensorFlow: Data and Deployment Specialization](#)
- [Data Mining Specialization](#)
- [Applied Data Science with Python Specialization](#)
- [Natural Language Processing Specialization](#)
- [IBM Deep Learning Professional Certificate](#)
- [Advanced Machine Learning Specialization](#)

PROJECTS

Selected Projects from Main Repository - [Code](#)

Graduation Project - Supervised by Dr. Mohamed ElShenawy

Title: Multi-stock Trading using Reinforcement learning

[Code](#)

- Developed a model that outperformed the market with a 100% annual return and 3.4 Sharpe ratio.
 - Gained knowledge about market infrastructure, fundamental and technical analysis.
 - Explored the field of quantitative trading and high-frequency trading (HFT).
 - Worked with multiple quantitative trading platforms, libraries, and APIs.
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Mortgages Analysis in the US market - [Code](#)

- Conducted data analysis on mortgage data using Apache Spark.
 - Explored factors affecting loan acceptance.
 - Utilized Spark ML to predict loan approval or denial.
 - Provided recommendations to applicants to increase their chance of acceptance.
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Music genres Classification - [Code](#)

- Classified music genre dataset using two approaches.
 - Converted songs into Mel-spectrogram and fed them into CNN architecture.
 - Extracted meaningful features from songs and fed them to FNN.
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RNA-Protein Inter-residual Distance - [Code](#)

- Dealt with large RNA-Protein 2D sequences containing inter-residual distances.
 - Performed feature engineering to extract pairs and train them on NN.
 - Predicted distances and places of contacts in new sequences.
-

Arabic Dialects Classification - NLP - [Code](#)

- Utilized Natural Language Processing techniques to build models that predict Arabic dialects given a text.
- Implemented two machine learning models (Naive Bayes and Linear SVC) and two deep learning models (Vanilla RNN and LSTM).
- Included a Flask application for deploying the model.

Skin Cancer Classification - [Code](#)

- Improved the accuracy of a skin cancer image classification model through data augmentation, feature engineering, and fine-tuning.
 - Dealt with a binary-categorical classification problem of skin cancer images and associated metadata such as age and background of image owners.
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Traffic Flow forecasting algorithms for route optimization - Supervised by Giza Systems, Smart Solutions for Tomorrow

- Conducted benchmarking of traffic flow forecasting algorithms using time series analysis and forecasting techniques.
 - Compared and benchmarked SARIMAX, VARIMAX, random forest regressor, and DCRNN models.
 - Created an API using Django REST Framework and dashboard using plotly for users to select a specific time range and multiple sensors for traffic flow forecasting.
 - Developed the ability to compute the best route based on the forecasted traffic flow using dijkstra algorithm.
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Date Extraction from Identification Documents - [Code](#)

- Developed a system to extract date information from identification documents.
 - Utilized a Convolutional Recurrent Neural Network (CRNN)-based Optical Character Recognition (OCR) model.
 - Trained and tested the OCR model for real-time date extraction.
 - Encapsulated the system in a Python script and included a Django web application for real-time extraction.
 - Converted the trained OCR model into ONNX or TensorRT formats for further use.
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Financial Advisor (Digital Lending System)

[Code](#)

- Created a digital lending system powered by GPT-3.5 Turbo.
- Assisted users throughout their loan application process by clarifying terms and conditions.
- Performed preliminary creditworthiness checks using Natural Language Processing (NLP) analysis of applicant-provided narratives.
- Packaged the digital lending system as a Django app that acts as a personal financial advisor (chatbot).
- Developed a bash script to automatically open the Django app in a new browser tab.

ADDITIONAL INFO

- **English:** Full Professional Proficiency
- **Arabic:** Native
- **Military:** Exempted