

# Ziad Mahmoud Mohammed

## Data Scientist

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🛂 Military state: Exempted

🌐 ziad-mahmoud177

🔗 Ziad236

📍 Alexandria, Egypt (Willing to relocate)

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## Profile

AI enthusiast with a strong academic background in machine learning, deep learning, and computer vision. Proficient in Python, experienced in data preprocessing, model development, and evaluation. Seeking a data science role to apply my skills in predictive modeling and data analysis.

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## Experience

- **Giza Systems** Headway Intern, Data Science  
Cairo, Egypt 09/2024 – 02/2025  
Worked on data-driven projects involving analysis, preprocessing, and visualization to solve business problems.
- **Giza Systems** ITI Graduation Project, supervised by Giza Systems  
Cairo, Egypt 05/2023 – 07/2023  
Project: Benchmarking of Traffic Flow Forecasting Algorithms for Route Optimization  
Benchmarked various models for traffic flow forecasting. Designed an interactive dashboard for visualization of traffic data, enhancing decision-making processes.  
Tools: Pandas, NumPy, Django Rest Framework, Dash, Plotly.

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## Education

- **Information Technology Institute (ITI), Alexandria, Egypt**  
9-Month Professional Diploma – AI & ML Engineering Track 10/2022 – 07/2023  
Relevant Coursework: Machine Learning, Deep Learning, Data Visualization, Natural Language Processing, Computer Vision.
- **Faculty of Science, Alexandria, Egypt**  
Bachelor of Science, Software Industry and Multimedia department 09/2018 – 07/2022  
Cumulative GPA: 3.15/4.0, Grade: Very Good  
Relevant Coursework: Statistics, Linear Algebra, Numerical Methods, Programming.

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## Projects

- **Arabic Dialects Classification**  
Applied Linear SVC achieving 80% F1 Macro score & LSTM achieving 75% F1 Macro score to predict Arabic dialects given the text.
- **Diabetes Readmission Prediction, Kaggle Competition by ITI**  
Predicted readmissions of diabetic patients using the Diabetes 130-US hospitals dataset (1999-2008). Achieved Second place with a 73.5% micro F1 score by optimizing feature selection and model parameters.
- **Unicorn-Companies Dashboard**  
Leveraged Plotly for data visualization using the "Unicorn\_Companies.csv" dataset. The dashboard provides an interactive experience to understand trends among unicorn companies, helping investors identify potential growth areas.
- **Hate Speech Classification**  
Collected data from Twitter and used Logistic Regression, XGBoost, and SVC to classify hate speech. Achieved the best performance with SVC, obtaining an F1 score of 77%.
- **Credit Card Approval Analysis**  
Used the Credit Card Approval dataset to perform data transformations and applied Logistic Regression, XGBoost, and LightGBM. The last two models performed better based on metrics like Recall, Precision, F1, ROC, and the learning curve.

- **Sales Data Modeling and Visualization**

Designed a data model using the star schema on a denormalized sales dataset. Created a Power BI report showing Total Sales, Average Revenue Per Customer, Sales Volume, Top-Selling Products, and Low-Performing Products.

- **Credit Card Clustering, Unsupervised Machine Learning Project**

Applied unsupervised learning algorithms (K-means, HC, GMM, DBSCAN) on the "CC GENERAL.csv" dataset to determine optimal clusters. Improved clustering results by adjusting parameters and using PCA for dimensionality reduction. The best two models were k-means and HC.

- **Head Pose Estimation**

Estimated head pose using the MediaPipe library on the AFLW2000 dataset. Applied SVR, Decision Trees, and XGBoost. The best model was obtained from grid search with SVR.

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## Skills

**Technical Skills:** Python / OOP

Deep Learning / Natural Language Processing

Image Processing & Computer Vision

Supervised & Unsupervised Machine Learning

Data Structures & Algorithms

Data Preprocessing & Visualization

SQL & NoSQL / Git.

**Tools:** NumPy / Pandas / Matplotlib / Seaborn

Scikit-learn / TensorFlow / AWS / Dash

Plotly / PowerBI / MySQL / Microsoft SQL Server

MongoDB / Elasticsearch / Kibana / Alteryx /

Apache Kafka / Airflow / Apache Nifi / Docker.

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## Certificates

Convolutional Neural Networks, Coursera

Neural Networks and Deep Learning, Coursera

Supervised Machine Learning: Regression and Classification, Coursera

Unsupervised Machine Learning, Coursera

Natural Language Processing with Classification and Vector Spaces, Coursera

Fundamentals of Deep Learning, Nvidia

Intermediate Python, Datacamp

Intermediate SQL Queries, Datacamp

Introduction to Git, Datacamp