

MAHMOUD ADEL

Junior Data Analyst

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• Cairo

Summary

Seeking opportunities to apply and enhance expertise in data processing, statistical analysis, and time series machine learning. With one year of experience, proficient in Python, SQL Server, and libraries such as Pandas, NumPy, and Matplotlib for data manipulation and visualization. Skilled in formulating and refining models to transform raw data into actionable insights, employing advanced techniques in regression analysis, classification, clustering, and feature engineering.

Experienced in uncovering patterns in marketing metrics, advanced time series analysis, and data mining techniques. Freelance and self-learning projects include predictive modeling, customer segmentation, and marketing campaign optimization, **demonstrating adaptability, self-motivation, and strong problem-solving abilities** across various industry requirements. Combine strong mathematical and statistical foundations with practical applications, **delivering clear, data-driven insights through effective communication and collaboration.**

Recognized for **critical thinking, attention to detail, and a proactive mindset**, with the ability to work independently or in team environments. Passionate about leveraging data to fuel strategic decisions, **continuously learning**, and driving innovation in data science.

Education

 Tanta University09/2019 - 07/2024

Bachelor's degree in computer science | GPA: 4.0 / 2.8

Trainings

Data Analysis Training

ALX Africa

• <http://www.udacity.com/certificate/e/a4c7a3d4-6f85-11ed-b36b-0fee95b3fbf4>

Advanced Data Analysis training

EgyFWD

• <https://www.udacity.com/certificate/e/5bdd832a-2a41-11ed-bf68-93066ab0aab7>

Machine Learning Cross-Skilling

EgyFWD

• <https://www.udacity.com/certificate/e/5b921e5a-7175-11ed-a2de-1726186638ac>

Applied Data Science Lab

WorldQuant University

• https://www.credly.com/badges/7beb906b-8292-48fa-a4f6-db9dd45b1d02/linked_in_profile

Skills

Machine Learning • Deep Learning • Classification • Regression • Clustering • Dimensionality Reduction • Anomaly Detection • Deterministic Predictions • Stochastic Predictions • time series forecasting

Data Mining • Association Rule • Sequential Pattern

Analyze Complex datasets • Connect the results to create a specific solution at the end • Achieving the business goal

Adaptability • Self-Motivation • Problem-Solving

Projects

Retail Transaction

<https://github.com/Mahmoudadel2002150/Retail>

- Conducted data wrangling and exploratory data analysis (EDA) on 100,000+ user interactions, uncovering trends in recipe popularity and user behavior.
- Implemented CLTV and RFM analysis for customer segmentation.
- Applied data mining techniques to uncover hidden patterns for upselling opportunities.

Branch Sales Forecasting

<https://github.com/Mahmoudadel2002150/Branch-Sales-Analysis-Forecasting-Project>

- Classified products using ABC/XYZ analysis for sales prediction.
- Conducted data wrangling and exploratory data analysis (EDA) on 100,000+ user interactions, uncovering trends in recipe popularity and user behavior.
- Built advanced time series models, including ARIMA, LSTM, and Prophet.
- Integrated probabilistic models with Monte Carlo simulations and ensemble methods for robust forecasting

Recipe Site

https://github.com/Mahmoudadel2002150/Website_Traffic

- Conducted data wrangling and exploratory data analysis (EDA).
- Business metrics, which are used to help the company change its attention to the right path.
- Built a machine learning pipeline to predict website traffic based on user preferences, achieving a 20% increase in traffic forecasting accuracy.
- Deployed the model using Streamlit for easy access by stakeholders.

Clustering Analysis & Classification

- Conducted data preprocessing, including handling missing values, normalization, and feature scaling.
- Applied hierarchical clustering to group data based on similarity metrics and determined optimal clusters using a dendrogram, the elbow method, and the silhouette score.
- Selected important columns using 2+ methods: ANOVA and predictive power score (PPS).
- Evaluated clustering effectiveness on a classification task.

Brokers

Graduation Project

- Collected and analyzed data from over 250,000 houses across various cities to address estimation challenges using artificial intelligence.
- Processed data wrangling to make data usable.
- Data Validity process to filter out the inaccurate values
- EDA process to gain insights into patterns, trends, and relationships between variables and oversampling to increase minority categories in cities to reduce bias in machine learning models.
- Made an interactive dashboard using Python, then integrated Python with Power BI to create the final dashboard.
- Addressed the inefficiencies of traditional expert-based estimations by building six data-driven models to predict ranges instead of point-based values, reducing time and resource wastage.
- Deployed the final model and dashboard through Streamlit, delivering an accessible web application for stakeholders to interact with results seamlessly.

Certifications

Certified Data Science Professional — <https://www.datacamp.com/certificate/DS0020455800204>

Certified Data Analysis Professional — <https://www.datacamp.com/certificate/DA0021834787490>

Advanced SQL Level — <https://www.hackerrank.com/certificates/288ecdc9116a>

Key Achievements

💎 150% increase in sales and social media followers

Working to define the company's primary objective, which led to a 150% increase in sales and social media followers by leveraging the objective in advertising campaigns.