

Fares Esaam El-dein

AI & Data Scientist

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Experienced AI and Data Scientist with a passion for leveraging data to drive insightful decision-making. Dedicated to solving complex problems and creating impactful, data-driven solutions through continuous learning and innovation.

Professional Experience

Data Scientist

- Utilized machine learning algorithms to analyze and extract insights from large datasets
- Created data visualizations and dashboards to communicate findings to stakeholders
- Performed data preprocessing by cleaning, handling missing values, and normalizing datasets to ensure high-quality inputs for machine learning models

AI Research Engineer

- Researched and implemented cutting-edge AI techniques to enhance natural language processing capabilities
- Designed and developed deep learning models for pattern recognition and anomaly detection
- Collaborated with researchers to publish papers on AI advancements and best practices
- Optimized algorithms for performance and scalability in real-world applications

CortexX — Enterprise Sales Forecasting & Demand Prediction

- Designed and implemented data preprocessing pipelines including data loading, cleaning, missing value handling, outlier detection, and feature engineering for time series data.
- Designed and developed a production-ready forecasting platform using 9 Machine Learning algorithms (XGBoost, LightGBM, CatBoost, and Random Forest) to predict sales and demand with high precision.
- Engineered advanced time-series features including cyclical encoding (Sine/Cosine), Fourier transformations, and rolling statistics to capture complex seasonality and trends.
- Implemented uncertainty quantification using Residual-based and Quantile Regression methods to provide 95% confidence intervals for business decision-making.
- Built an interactive data visualization dashboard using Streamlit and Plotly, allowing stakeholders to perform EDA, outlier detection, and "what-if" scenario analysis.
- Ensured code reliability with 95% unit test coverage and automated data validation pipelines using Python's best practices.

End-to-End Data Analysis Project (EDA)

- Executed a comprehensive data analysis workflow on a complex dataset, involving extensive data cleaning, transformation, and exploratory data analysis (EDA) using Python (Pandas, NumPy).

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- Performed Data Wrangling to handle missing values, outliers, and data inconsistencies, ensuring 100% data integrity for the analysis phase.
- Documented the entire analytical process in a structured Jupyter Notebook, providing clear storytelling and business recommendations based on the data.

Education

Minia National University

2024 – 2027

Bachelor's Degree in Artificial Intelligence

Digital Egypt Pioneers Initiative (DEPI)

Jun, 2025 - Nov, 2025

Ministry of Communications & IBM

Professional Training Program in Data Science & AI

– focused on machine learning, data preprocessing, model deployment, and visualization.

Key Skills

- **Machine Learning (Sklearn)**
- **Data Analysis tools (Pandas, Numpy)**
- **Data Preprocessing**
- **Data Visualization tools (Streamlit, Plotly, PowerBI, Matplotlib, Seaborn)**
- **Python Programming**
- **SQL**
- **Time Management**
- **Teamwork**
- **Continuous Learning**
- **Problem Solving**

Interests

Continuous Learning in Data Science Trends

Development of AI-driven Business Strategies