**Abdelrhman Ahmed Ezzat**

**Data Scientist**

 **Kafr el-Sheikh, Egypt**  **+20-101-801-8692** [](mailto:abdalarhmanezzat@gmail.com) [**abdalarhmanezzat@gmail.com**](mailto:abdalarhmanezzat@gmail.com)

**[](http://www.linkedin.com/in/abdelrhman-a-ezzat)** [**www.linkedin.com/in/abdelrhman-a-ezzat**](https://www.linkedin.com/in/abdelrhman-a-ezzat/) [](https://github.com/Abdelrhman941) [**github.com/Abdelrhman941**](https://github.com/Abdelrhman941/)

## **Summary**

Data Scientist proficient in Python and Machine Learning, with strong expertise in Data Science workflows including EDA, predictive modeling, Model Optimization, and data storytelling. Experienced in end-to-end projects with real-world applications. Strong foundation in AI techniques, with hands-on deployment experience (FastAPI, Docker) and a track record of building real-world ML prototypes.

## **Education**

Menoufia University — B.Sc. Artificial Intelligence & Data Science. Oct 2022 – Expected Jul 2026

## **Experience**

### **Digital Egypt Pioneers Initiative (DEPI) – Generative AI Trainee** Jul 2025 – Present

* Contributed to a national initiative on advanced AI and Data Science technologies, focusing on Generative AI and Large Language Models (LLMs).
* Trained in Generative AI, LLMs, and prompt engineering techniques.
* Developed prototype Machine Learning applications leveraging LLMs and Generative AI models, with focus on scalability and deployment.
* Collaborated with a team of peers to design prompt engineering workflows.

## **Skills**

### **Technical Skills:**

* **Programming & Data Handling:** Python, SQL, PostgreSQL, NumPy, Pandas, OOP.
* **Machine Learning:** Scikit-learn, Random Forest, XGBoost, SVM, Decision Trees, Logistic Regression, Feature Engineering, Feature Selection, Model Evaluation, Hyperparameter Tuning.
* **Deep Learning:** PyTorch, NLP (Transformers, NLTK), Computer Vision (OpenCV), Reinforcement Learning.
* **Deployment & Cloud:** Docker, FastAPI, MLOps, AWS (S3, EC2), Azure (ML Studio), GCP (BigQuery).
* **Data Visualization & Storytelling:** Matplotlib, Seaborn, Power BI, Streamlit.
* **Big Data & Forecasting:** Hadoop, Spark, Prophet, ARIMA, SARIMA.

### **Soft Skills:**

* Problem-Solving, Communication Skills, Adaptability, Collaboration & Teamwork, Time Management, Critical Thinking, Leadership, Creativity.

## **Projects**

### [**Traffic Sign Detection and Classification (GTSRB)**](https://github.com/Abdelrhman941/CV-traffic-signs) Dec 2023

* Collaborated with a team to optimize a CNN model, achieving **98.5% accuracy**.
* Optimized inference speed to **<50ms per image** for real-time use.

**Tools**: Python, TensorFlow, Keras, OpenCV.

### [**DQN Agent for 2048 Game (Reinforcement Learning)**](https://github.com/Abdelrhman941/2048-Game-Project) May 2025

* Designed and implemented a Deep Q-Learning agent that consistently reached the 2048 tile in 85% of games.
* Trained on over **10,000 episodes**, achieving average score **15,000+ points**.

***Tools****: PyTorch, NumPy.*

### [**Vehicle Detection using Haar Cascades (OpenCV)**](https://github.com/Abdelrhman941/Vehicle-Detection-Project) Dec 2023

* Implemented real-time vehicle detection with Haar cascades.
* Deployed working prototype with annotated bounding boxes.

***Tools****: Python, OpenCV.*

### [**Sports Popularity Analysis with Web Scraping**](https://github.com/Abdelrhman941/Sports-Popularity-Project) May 2025

* Processed **10,000+ data points** across 50+ sports categories using Google Trends API.
* Identified seasonal viewership trends and built predictive models.

***Tools****: Python, BeautifulSoup, Pandas.*

### [**Auto-correct System using NLP & Edit Distance**](https://github.com/Abdelrhman941/Auto-correct-Project) May 2025

* Developed a spelling correction system that achieved **92% accuracy** on benchmarks.
* Handled **50,000+ vocabulary words** and multi-word error corrections.

***Tools****: NLTK, spaCy, Edit Distance, N-gram models, Transformers.*

### [**House Prices EDA & Regression Modeling**](https://www.kaggle.com/code/abdelrhmanahmedezzat/house-prices-code-eda) Apr 2025

* Performed EDA and feature engineering as part of a Data Science pipeline.
* Built regression Machine Learning models with cross-validation, improving baseline RMSE by 15%.

***Tools****: Pandas, Seaborn, Scikit-learn.*

### [**Student Performance Prediction**](https://www.kaggle.com/code/abdelrhmanahmedezzat/project-on-student-performance) Dec 2023

* Predicted student grades using regression (Linear, Ridge, Lasso).
* Visualized socio-demographic trends with Seaborn; improved R² vs baseline.

***Tools****: Scikit-learn.*