

Ibrahim Mohamed Amin

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PROFESSIONAL SUMMARY

High-achieving Artificial Intelligence Engineering student with strong expertise in Python, SQL, machine learning, and data analysis. Hands-on experience building and deploying predictive models, performing data cleaning, feature engineering, and extracting actionable business insights. Passionate about applying advanced AI and data-driven solutions in global-scale organizations to solve complex real-world problems, optimize decision-making, and drive innovation.

EDUCATION

Mansoura National University – Faculty of Engineering

Dakhlia, Egypt

Bachelor of Artificial Intelligence Engineering

Expected July 2027 (Accelerated Program)

GPA: 3.91/4.00

WORK EXPERIENCE

Digital Egypt Pioneers Initiative (DEPI) – Data Science & AI Track (DESIGNED BY IBM)

June 2025 – December 2025 | Hybrid

- Practical training in **Python, SQL, Data Analysis, Data Visualization**, and **Machine Learning**.
- Working with tools like **Pandas, Scikit-learn, Matplotlib**, and **MLflow** for model management.
- Collaborated with a team to develop a **Machine Learning model for diamond price prediction (lumiere)**, applying data preprocessing, feature engineering, and model evaluation techniques.

NVIDIA DLI Summer Training Program – Generative AI (Beginner Level)

ITI (Information Technology Institute)

September 2025 | 35 hrs | Online

- Gained hands-on experience in Python fundamentals and AI concepts for all levels.
- Explored Generative AI, built LLM applications with prompt engineering, and augmented LLMs using RAG.
- Completed practical exercises covering AI fundamentals, generative AI workflows, and real-world LLM applications.

PROJECTS AND COMPETITIONS

lumiere – Diamond Price Prediction

Machine Learning

- Developed a predictive model on a **53,940 × 10 dataset** for diamond prices using multiple ML models.
- Selected **XGBoost** as the best model, achieving a **Test RMSE of 0.0964** and **Test R^2 of 0.9909**, outperforming Gradient Boosting and other ensemble models.
- Applied advanced preprocessing, feature engineering, encoding, and outlier handling to maximize predictive performance while maintaining strong generalization (overfitting score: 0.0019).
- Compared classical and ensemble models to ensure the final model provided the most accurate and reliable diamond price predictions.

Online Marketplace Sales Data Analysis

Data Cleaning & EDA

- Cleaned and validated a dataset of **1,155 sales transactions** spanning 16 months, addressing missing values, duplicates, and outliers.
- Engineered **time-based features** (day, week, month, season) and analyzed sales trends across **6 product categories, 3 regions, and 7 payment methods**.
- Visualized insights using **Matplotlib** and **Seaborn**, providing actionable business recommendations for revenue trends, regional performance, and payment method adoption.

SKILLS

Technical Skills: Python, C, SQL (Joins, Aggregations), Machine Learning (Supervised Unsupervised Learning),

Ensemble Methods (Random Forest, XGBoost), K-Means, PCA, Neural Networks

Data Analysis & manipulation (NumPy, Pandas), Data Visualization (Matplotlib, Seaborn)

Soft Skills: Problem Solving, Teamwork, Communication Skills

Languages: Arabic (Native), English (Working Proficiency)

VOLUNTEER EXPERIENCE

Coaching Volunteer, Engineering Scientific Association (ESA)

Sep 2025 – Present

- Delivered a 6-session workshop teaching programming fundamentals using the C language.
- Mentored beginners with no prior programming experience, helping them build a solid foundation to continue learning independently.
- Enhanced participants' problem-solving skills through hands-on coding exercises and guidance.

Logistics Volunteer, IEEE MNU Student Branch

Jan 2025 – Present

- Member of the Logistics Department; helped organize events and manage resources as part of IEEE activities at Mansoura National University.

FEMNU Ambassador (Student Assistant), Mansoura University

Aug 2024 – Present

- Assisted new engineering students with enrollment and inquiries; recognized by the Engineering Programs Director for outstanding support.