Ahmed Hassan Eldemery

Machine Learning Engineer

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GitHub Kaggle

EXPERIENCE

Machine Learning Engineer Trainee 06/2025 – 12/2025
Huawei Machine Learning Training – Mansoura University Collaboration Mansoura ,Egypt
Completed an intensive hands-on training program focused on core Machine Learning concepts and practical implementation. Gained strong experience in data preprocessing, feature engineering, and model development using Python and Scikit-learn. Explored supervised and unsupervised learning algorithms, including regression, classification, and clustering techniques. Worked on applied projects analyzing real-world datasets and improving model accuracy through performance tuning. Enhanced understanding of AI workflows, from data collection to model evaluation and deployment readiness.
Technologies: Python, Pandas, NumPy, Scikit-learn, Matplotlib, Jupyter Notebook

Machine Learning Engineer Intern 06/2025 – 07/2025
Machine Learning Internship – National Telecommunication Institute (NTI) Mansoura, Egypt
Completed an intensive applied training program in Machine Learning with a focus on real-world business applications. Gained hands-on experience in data preprocessing, feature selection, and model building using regression and classification techniques. Developed a predictive analytics project — **E-Commerce Sales Prediction** — to forecast customer purchasing behavior using Python and Scikit-learn. Enhanced understanding of end-to-end ML pipelines, including data cleaning, model evaluation, and performance optimization. Collaborated in a practical environment that simulated real industry challenges and emphasized data-driven decision making.
Technologies: Python, Pandas, NumPy, Scikit-learn, Matplotlib, Jupyter Notebook

Education

Bachelor of Computer Science, Minor in Artificial Intelligence, 10/2023 – 07/2027
Mansoura University Mansoura , Egypt
Status: Currently Enrolled – 3rd Year

Skills

Programming Languages
Python, SQL

Soft Skills
Teamwork, Collaboration, Problem-Solving, Communication.

Data Tools
Pandas, NumPy, Matplotlib, Seaborn, Git and Stremlit

Achievements

digitopia competition, *Sanad Team* 01/07/2025

- Advanced to the second stage of the competition as part of a team, demonstrating strong technical and collaborative skills.

2nd Place – AI Course Competition, *Faculty of computers and information , MU* 24/05/2025

- Awarded second place in a practical AI course for outstanding performance in applying machine learning techniques to real-world problems, demonstrating strong analytical and technical skills.

Volunteering & Activities

AI Team Leader 06/2025 – 07/2025
Remote

- Led a team of peers during the E-Commerce Sales Prediction project, coordinating task distribution, ensuring model development progress, and maintaining workflow efficiency. Facilitated collaboration, guided problem-solving discussions, and ensured timely project completion with high performance and accuracy.

Hackathon Student Team (Faculty of Engineering, Mansoura University), Mansoura, Egypt
AI Training Program Participant
Successfully completed a comprehensive 21-hour AI training program. The program covered essential concepts and practical skills in data science and machine learning, including:

- Python programming
- Data fundamentals ("data roots")
- Data cleaning ("cleanse for growth")
- Data exploration ("explore data landscapes")
- Applying machine learning to "plant science"

PROJECTS

E-commerce Customer Analysis & Spending Prediction,
Interactive Streamlit Web App for Customer Data Analysis
Designed and built an interactive web application using Streamlit to perform a comprehensive analysis of e-commerce customer data. The application allows for data exploration, visualization of key customer metrics, and the training of a predictive model (linear regression) to accurately forecast annual customer spending based on their attributes and behavior.

Image Segmentation with Gaussian Mixture Models, *Unsupervised Machine Learning for Pixel Clustering*

- Developed an unsupervised machine learning model for image segmentation. This project applies a Gaussian Mixture Model (GMM) trained using the Expectation-Maximization (EM) algorithm. To improve convergence and final accuracy, the GMM is initialized with cluster centers derived from the K-Means algorithm. The model successfully segments images by grouping pixels into distinct clusters based on their color properties.

USA Adult Income Exploratory Data Analysis (EDA),
Analysis of Demographic Factors on Income Level (UCI Dataset)

- Conducted a detailed exploratory data analysis (EDA) on the UCI Adult Income dataset. This project involved extensive data cleaning and preprocessing using Pandas and NumPy. Leveraged Matplotlib and Seaborn to create insightful visualizations, uncovering key patterns and relationships between demographic features (like age, education, and occupation) and the corresponding income category (<=50K or >50K).

Courses

Professional Development Skills for the Digital Age, *ALX* 05/2025 – 08/2025
Completed a professional foundations program focused on developing critical soft skills required for success in the modern digital workplace. Remote

Introduction to Machine Learning, *Mansoura University, Digital Training Center* 03/2024 – 05/2024
A comprehensive 66-hour integrated training course covering the fundamentals of machine learning and data science. Mansoura, Egypt
Key modules included:

- Python for Data Science
- Data Pre-processing
- Linear Algebra, Packages, & Statistics
- Regression & Classification
- Clustering
- Practical implementation with Libraries & Projects

Achieved an "Excellent" grade across all modules.