

# Ahmed Ayman Al-Hofy

Data & ML Scientist | Cairo, Egypt | +201027557259 | [ahmedalhofy42@gmail.com](mailto:ahmedalhofy42@gmail.com) | <https://github.com/AhmedAyman4> | <https://www.linkedin.com/in/ahmed-alhofy/> | [View my website!](#)

## SUMMARY

Aspiring Data & Machine learning Scientist with skills in Python, SQL, ML, NLP, and data analysis. Proficient in Pandas, Scikit-learn, Tableau, and Power BI. Information Systems student at the Faculty of Computers & AI, University of Sadat City, Passionate about using data to solve everyday challenges and applying AI to create practical, impactful solutions.

## EDUCATION

Bachelor's Degree, Faculty of Computers & Artificial Intelligence – University of Sadat City Graduating June 2026  
CGPA: 3.23 & Major: Information Systems.

## SKILLS

**Languages:** Python (NumPy, Pandas, Scikit-learn, NLTK), SQL, MySQL, HTML, CSS, JavaScript, React.js, and Next.js.  
**Tools & Skills:** Excel, Tableau, Power BI, ML, NLP, data analysis, visualization, probability, statistics, OOP, problem-solving, communication, adaptability, and analytical thinking.

## EXPERIENCE

**Data scientist | Digital Egypt Pioneers Initiative - DEPI · Internship** | Alexandria, Egypt · Hybrid Oct 2024 – May 2025

- Analyze data using Python, SQL, and analytics tools to identify trends, opportunities, and business insights.
- Build and deploy ML models with Python, Scikit-learn, and MLflow, leveraging AI and prompt engineering for integration.

**Intern | CIB Egypt** | Cairo, Egypt Jul 2024 - Jul 2024

- Gained data and financial literacy expertise, entrepreneurship, and teamwork to enhance problem-solving, decision-making, and business success.

## PROJECTS

### Semantic Book Recommender With LLMS:

- Built an end-to-end book recommendation system that enhanced user query relevance and filtering by integrating semantic search, zero-shot classification, and sentiment analysis using LLMs; deployed an interactive Gradio web app enabling real-time recommendations based on tone, genre, and natural language input.

### Customer Segmentation:

- Segmented wholesale customer data into 6 clusters using K-Means, Hierarchical, DBSCAN, and MeanShift to enhance customer understanding for targeted strategies.
- Applied feature scaling, log transformations, and PCA for preprocessing and visualization, then evaluated clusters using Silhouette, Davies–Bouldin, and Calinski–Harabasz indices to select the optimal model.
- Identified actionable customer profiles (e.g., Retailers, Fresh-First Shoppers, Low-Volume Shoppers) from spending patterns, enabling data-driven marketing and sales insights.

### Automated Market Data Scraper (Real Estate & E-Commerce):

- Developed Python web scrapers using Playwright & BeautifulSoup to extract 1,400+ real estate listings and 250+ gaming laptops, capturing price, location, features, ratings, and links, and storing results in structured Pandas DataFrames.
- Automated infinite scrolling and pagination, reducing manual effort by over 90% and enabling scraping of dynamic, JavaScript-rendered content.
- Built a robust data pipeline to convert raw HTML into clean CSV datasets with 7+ structured attributes for market and product trend analysis.
- Enhanced data accessibility with versioned CSV outputs and UTF-8 encoding for multilingual support.

### Customer Conversion Prediction:

- Developed a predictive model to identify high-potential customers by applying ML algorithms (Random Forest, Gradient Boosting) and optimizing marketing efforts through data analysis and visualization.

## COURSES AND CERTIFICATIONS

AWS Certified AI Practitioner Issued by Amazon Web Services Training and Certification	Apr 2025
Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate Issued by Oracle	Jun 2025
Data Scientist Associate Issued by Data Camp	Aug 2024
IBM SkillsBuild Data Analytics Certificate Issued by IBM SkillsBuild	Jun 2025
AWS Academy Graduate - AWS Academy Machine Learning for Natural Language Processing	Aug 2024
AWS Academy Graduate - AWS Academy Cloud Foundations	Jun 2024

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| • AWS Academy Graduate - AWS Academy Data Engineering               | Jun 2024 |
| • Applied Data Science with Python - Level 2 Issued By IBM          | May 2024 |
| • Google Data Analytics Professional Certificate Issued by Coursera | Jul 2024 |
| • The Machine Learning Process A-Z – Issued By 365 Data Science     | Nov 2024 |
| • McKinsey Forward Program - Issued by McKinsey & Company           | Dec 2024 |