

# Abdelrahman Alaa

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DATA ANALYST | DATA SCIENTIST

## Profile

Passionate data professional transforming raw data into strategic insights through advanced analytics (15%+ efficiency gains). Google & IBM-certified in Data Analytics and Machine Learning, with hands-on experience building predictive models (95% accuracy) and 10+ interactive dashboards (30% faster reporting). Currently advancing deep learning/AI expertise while teaching 50+ students data science fundamentals at Pioneer Academy. Combines technical mastery (Python, Power BI, statistical modeling) with business acumen to drive data-informed decisions.

## Technical Skills

- Programming Languages: Python, SQL
- Databases: SQL Server, MySQL, SQLite
- Data Analytics & BI Tools: Power BI, Tableau, Excel (Power Query, Pivot Tables)
- Data Science Libraries: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn
- Data Engineering & ETL: Apache Airflow, Shell Scripting

## Work Experience

### CS Instructor | Jan 2025 - present

Pioneer Academy, Alex, Egypt

- Delivered instruction to Computer Science students with a focus on applying discrete mathematics in CS and Data Science contexts.
- Designed and conducted hybrid learning sessions to develop students' analytical thinking and problem-solving abilities.
- Mentored students to strengthen both technical skills and essential soft skills, including communication and teamwork.

### Data Analyst Intern | Sep 2024 – Nov 2024

National Telecommunication Institute (NTI), Alex, Egypt

- Analyzed large datasets to identify trends, improve operational efficiency, and provide actionable insights.
- Optimized business operations through data-driven decision-making, resulting in a 15% improvement in process efficiency.
- Gained hands-on experience with Power BI and Excel to create interactive dashboards and reports.

### Summer Intern | Jul 2024 – Sep 2024

My-Communication, Alex, Egypt

- Implemented data analytics projects using Microsoft Power BI, delivering insights that improved decision-making.
- Applied SQL queries to analyze and manipulate large datasets, ensuring data accuracy and reliability.
- Utilized Python for data analytics and big data applications, reducing data processing time by 20%.

## Projects

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### Nature Medicine vs Pharmaceutical Drugs | Feb 2025 - Apr 2025

#### Data Analysis and Data Science Project

- Contributed to designing and distributing a public health survey on natural vs. pharmaceutical treatments.
- Cleaned and transformed multilingual data using Power Query (Arabic to English translation, multi-response normalization).
- Developed a 4-page interactive Power BI dashboard with real-time updates and demographic insights.
- Performed statistical analysis in Python: correlation matrix, chi-square tests, dimensionality reduction, and decision tree modeling.
- Analyzed trends across age groups and urban/rural populations to uncover treatment preferences.

Tools: Power BI, Power Query, Python, Pandas, Scikit-learn

### Bank Marketing Prediction | Dec 2024

#### Data Science Project

- Built and evaluated multiple ML models to predict customer subscription to term deposits using demographic and campaign data.
- Achieved up to 95% accuracy with a stacking ensemble model.
- Deployed the model via Streamlit for interactive user input and real-time prediction.
- Demonstrated how machine learning can optimize customer targeting in banking.

Skills: Machine Learning, Data Analysis, Streamlit, Scikit-learn, Python

### Chinook Music Store Data Analysis | Nov 2024

#### Data Analysis Project

- Analyzed customer and sales data from the Chinook database using SQL, Python, Excel, Tableau, and Power BI.
- Helped normalize data in Excel Power Query and structure dimension/fact tables.
- Designed and built the Power BI dashboard, visualizing key metrics like sales trends, top genres, and customer insights.
- Conducted EDA in Python and supported data cleaning and transformation.
- Delivered actionable insights into customer behavior and music sales performance.

Skills: SQL · Power BI · Data Cleaning · Excel Power Query · Tableau · Python · Data Visualization

## Certifications

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- IBM Machine Learning, Coursera | Apr 2025
- IBM Data Engineering, Coursera | Oct 2024
- Google Business Intelligence Specialization, Coursera | Jul 2024
- Google Data Analytics, Coursera | May 2024

## Education

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### Alexandria University | Oct 2022 – Present

#### Faculty of Computer and Data Science

- Specialization: Data Science

## ***Soft Skills***

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- **Analytical Thinking:** Applied analytical skills to extract insights from datasets, like in the Chinook Music Store analysis.
- **Problem Solving:** Solved challenges in data processing and optimized ETL pipelines in various projects.
- **Teamwork:** Collaborated on data cleaning, visualization, and analysis tasks using Power BI and Python.
- **Communication:** Presented complex data insights clearly through dashboards in projects like customer sentiment analysis.
- **Presentation Skills:** Delivered effective presentations, turning data into understandable insights for diverse audiences.
- **Fast Learner:** Quickly adapted to new tools, techniques, and concepts, applying them effectively in data-driven projects.

## ***Languages***

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- Arabic (Native)
- English (B2 - Professional Working Proficiency)