

Abdelrahman Bakr Ghazy

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PROFESSIONAL SUMMARY

Computer Science student specializing in AI with practical experience in data analysis and visualization. Built analytics solutions for marketing projects, including data cleaning, exploratory analysis, customer segmentation, and interactive dashboards in Power BI and Tableau. Proficient in Python, SQL, Excel, and machine learning libraries, eager to support data-driven decision-making in cross-functional teams.

EDUCATION

Ain Shams University

B.Sc., Computer Science - Artificial Intelligence

Oct 2023 - Present

Cairo, Egypt

- **Coursework:** Machine Learning, Data Structures & Algorithms, OOP (C++ / Java), Database Systems (Oracle DB, SQL), Software Engineering

CERTIFICATIONS & TRAINING

- Machine Learning for Data Analysis: Jul – Aug 2025, NTI (National Telecommunications Institute). Completed supervised and unsupervised learning, feature engineering, model evaluation, and Scikit-learn pipeline construction. Built end-to-end ML workflows using real datasets and reduced experimentation time through structured model testing.
- AI Training: Summer 2024, APPLAI. Trained in model selection, training pipelines, validation techniques, and performance optimization. Applied acquired methods across 5+ Machine Learning projects in healthcare, retail, and predictive analytics.
- Leadership Development: Aspire Academy. Developed leadership, communication, teamwork, and decision-making skills in collaborative environments. Practiced delegation, conflict resolution, and performance management in team-based scenarios.
- Excel for Data Analysis: Jun 2026, Udemy. Completed practical training in Microsoft Excel for data analysis and reporting. Learned formulas, sorting, filtering, tables, charts, and spreadsheet organization. Strengthened ability to analyze datasets and present business insights efficiently.

WORK EXPERIENCE

Dec 2025 - Present

Remote

Freelance ML Engineer & Data Analyst

- Designed a business analytics project for HandyHome Services by collecting and modeling data to optimize revenue, customer retention, and marketing ROI using data modeling techniques.
- Collected, cleaned, and organized datasets in Excel and Google Sheets, then analyzed ad spend, daily revenue, conversions, and platform performance across Instagram, Google, and email channels.
- Built customer segmentation strategies for new vs. returning customers to improve retention and lifetime value.
- Applied statistical methods and proposed predictive models using Python and Scikit-learn to forecast conversion likelihood based on marketing inputs.
- Planned interactive dashboards in Power BI/Tableau with actionable recommendations for budget allocation and growth.
- Performed exploratory data analysis (EDA) using Pandas and NumPy to uncover trends and insights that informed strategic recommendations.

PROJECTS

Retail Buyer Segmentation using Machine Learning

- Developed a Flask-based ML platform to segment 2,240+ customers using K-Means clustering and 6 classification models, integrating a preprocessing pipeline in Python (Pandas, NumPy) for data cleaning and exploratory data analysis to uncover purchasing patterns

Vitamin Deficiency Prediction System

- Built an end-to-end ML system using XGBoost and Random Forest on a 3,500-patient clinical dataset, implementing feature selection, a preprocessing pipeline in Python for data cleaning and statistical analysis, and deployed a Flask API to serve predictions

Exoplanet Detection using Machine Learning

- Developed an ML system for exoplanet detection using NASA Kepler data (4,000+ records, 129 features), using preprocessing and feature engineering with Random Forest, XGBoost, and ensemble models, achieving 87% accuracy and 0.94 ROC-AUC.

Emotion Detection System (Kaggle Competition – 1st Place)

- Built deep learning emotion recognition models using ViT, DeiT, ConvNeXt, and CNN architectures, achieving 74% competition accuracy, 91.4% validation accuracy, and securing 1st place on the Kaggle private leaderboard.

Billing System (Oracle DB)

- Developed a database-driven billing system for managing customers, invoices, payments, and transactions using Oracle DB and SQL with CRUD operations and relational database design

Medical Diagnosis Expert System

- Built a rule-based medical diagnosis system with NLP preprocessing, chatbot interaction, and a Streamlit interface for symptom-based disease prediction and medical assistance.

SOFT SKILLS

- **Soft Skills:** Analytical Thinking, Problem-Solving, Cross-Functional Collaboration, Adaptability, Stakeholder Communication, Attention to Detail, Self-Directed Learning, Time Management, Teamwork
- **Languages:** Python, SQL, Java, C++, JavaScript, HTML, CSS
- **ML / AI:** Scikit-learn, TensorFlow, Keras, XGBoost, Pandas, NumPy, Matplotlib, Seaborn
- **Dashboards & Viz:** Plotly, Dash, Streamlit
- **Tools & Platforms:** Git, GitHub, VS Code, Jupyter Notebook, Google Colab, Excel, Google Sheets
- **Concepts:** Machine Learning, Deep Learning, Feature Engineering, EDA, OOP, Data Preprocessing, AES Encryption, Statistics, Data Modeling

VOLUNTEER EXPERIENCE & AWARDS

USAID Scholars Program

Aug 2024

Team Leader - Summer Development Camp

- Led a team at the USAID Scholars Program summer camp to design and pitch Kits 4 Kids, a digital STEM education platform; secured 1st place in the camp-wide entrepreneurship challenge.

IEEE AI-Azhar Student Branch

2026 - Present

Vice Head - Data Science Committee

- Contribute to data science initiatives, workshops, and technical activities focused on analytics and machine learning.
- Collaborate with committee members on educational content, event execution, and community engagement.

LANGUAGES

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