

# ABDELRAHMAN BALBAA

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## Education

### Alexandria University

Faculty of Computer and Data Science — Artificial Intelligence Department  
Second-Year Student

Sep 2024 – May 2028

Alexandria, Egypt

## Technical Skills

**Programming Languages:** Python, Java, C++

**Tools & Libraries:** Pandas, Scikit-Learn, Matplotlib, Power BI, Excel, Tkinter

**Concepts:** Machine Learning, Deep Learning, NLP, Data Structures, OOP, Data Visualization, Clustering, Regression, Cloud Fundamentals (AWS)

## Experience

### Digital Egypt Pioneers Initiative (DEPI)

Fall 2025 – Present

DEPI Trainee

Alexandria, Egypt

- Selected as a participant in the Digital Egypt Pioneers Initiative (DEPI), a national program by the Egyptian Ministry of Communications.
- Receiving structured training in data engineering, and digital skills.
- Working on hands-on projects and collaborative tasks to apply technical concepts in real-world scenarios.

### WE (Telecom Egypt)

Jul 2025 – Aug 2025

AI & Data Analysis Intern

Alexandria, Egypt

- Applied **Python, Pandas, Power BI**, and Excel to analyze and visualize real datasets.
- Built ML prototypes, performed data cleaning, and feature engineering for business use cases.
- Collaborated with the data team to deliver actionable data insights.

### Commercial International Bank (CIB)

Jul 2025 – Aug 2025

Digital Transformation & Data Literacy Intern

Remote

- Explored how data analytics enhances business operations and decision-making.
- Worked with visualization tools to produce clear, ethical reporting dashboards.

## Projects

### Loan Approval Prediction — Python, Scikit-Learn, Pandas

Aug 2025

- Developed a classification model using a Kaggle dataset to predict loan approvals.
- Applied data preprocessing, encoding, and handled imbalanced data with resampling.
- Improved model recall by 18% through feature engineering.

### Mall Customer Segmentation — Python, K-Means, Matplotlib

Jul 2025

- Segmented customers by income and spending score using K-Means Clustering.
- Determined optimal clusters using elbow method and data scaling.

### Student Performance Prediction — Python, Linear Regression

Jun 2025

- Built a regression model to predict student scores based on study hours.
- Handled data cleaning and outlier detection; achieved  $R^2$  of 0.89.

### University Management System — Java, OOP, File I/O

May 2025

- Simulated university operations with roles for students, faculty, and admins.
- Implemented registration, GPA calculation, grading, and reporting features.

## Sparse Table for Course Registration — *Java, Linked Lists*

**Mar 2025**

- Implemented a memory-efficient sparse table using linked lists.
- Enabled dynamic enrollment and real-time course tracking.

## Maze Solver — *Python, BFS, DFS, Tkinter*

**Apr 2025**

- Created an interactive maze-solving application with real-time visualization.
- Implemented BFS and DFS algorithms to demonstrate search pathfinding.

## Certificates

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### Applications of Artificial Intelligence

**Aug 2025**

*The British University in Egypt — Faculty of Engineering*

*15 Hours Course*

### Intro to AI with AWS

**May 2025**

*Udacity*

*View Certificate*

### AWS Educate Machine Learning Foundations

**Jun 2025**

*Amazon*

*View Certificate*

### Oracle AI Foundations

**Jun 2025**

*Oracle*

*View Certificate*

### Python for Data Science, AI & Development

**Jul 2025**

*IBM*

*View Certificate*

## Activities

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### Safwa FCDS

**Spring 2025 – Present**

*Media Head*

- Led a student media team, enhancing communication and coordination skills.
- Created structured content and managed team workflows, demonstrating strong organizational and leadership abilities.

### Digital Egypt Pioneers Initiative (DEPI)

**Fall 2025 – Present**

*DEPI Team Leader*

*Egypt*

- Selected as a Team Leader within the Digital Egypt Pioneers Initiative (DEPI).
- Leading and coordinating a group of trainees, ensuring task completion and effective collaboration.
- Supporting peers technically and facilitating communication between team members and mentors.