

Shaimaa Mohammed Abuzaid

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Summary

Artificial Intelligence graduate with Excellent with Honors (GPA: 3.69/4.00), skilled in machine learning, NLP, and data analysis with strong foundations in mathematics and programming. Experienced in AI projects and active in student communities as Head of PR, combining technical expertise with leadership and teamwork. Motivated to pursue teaching and research in Artificial Intelligence.

Education

B.Sc. in Artificial Intelligence – Egyptian E-Learning University, Assiut Campus (2021 – 2025) Graduated with Excellent with Honors – GPA: 3.69/4.00

Projects

Heart Disease Prediction

Developed a predictive model for early detection of heart disease using patient health indicators. Implemented a Decision Tree classifier as baseline and applied a Genetic Algorithm for feature selection and optimization.

Sentiment Analysis

Built an NLP pipeline for sentiment classification of social media text. Applied preprocessing (tokenization, stemming, stopword removal, emoji handling), and used TF-IDF for feature extraction. Trained a Logistic Regression model with cross-validation and deployed it using Pickle for real-time predictions.

Knapsack Problem Optimization – Genetic Algorithm with Streamlit

Designed and implemented a Genetic Algorithm to solve the Knapsack optimization problem. Applied GA operators (selection, crossover, mutation) to improve solutions iteratively. Developed an interactive Streamlit web app allowing users to define test cases and visualize optimized solutions.

Graduation Project –Smart Land Management with AI

Built the Conversational AI module using Google Gemini 2.0 Flash with LangChain to provide real-time agricultural recommendations. Developed FastAPI endpoints integrated with a database for soil data and conversation history. Conducted EDA on a Kaggle dataset (14 features), identifying key relations between Soil Moisture and Nitrogen Level. Designed a rule-based expert system achieving 100% accuracy in classifying plant status.

Certifications & Training

- Basic Space & Satellite Technologies – EGSA (October 2022)
- Database Fundamentals –ITI (2023)
- AI Summer Training– NTI (July 2023)
- Linear Algebra for Machine Learning and Data Science – Coursera (August 2025)
- Data Visualization – Kaggle (September 2025)

Skills

Technical Skills:

- Programming Languages: Python, C++, java
- Machine Learning: Supervised & Unsupervised Learning, scikit-learn
- Data Analysis & Visualization: NumPy, Pandas, Matplotlib, Seaborn
- Deep Learning: Neural Networks, CNNs, RNN, LSTM, TensorFlow, Keras
- Tools & Environments: Jupyter Notebook, Google Colab, Git, VS Code

Soft Skills: Leadership – Communication – Teamwork – Problem-Solving – Analytical Thinking – Presentation Skills

Volunteer Work & Activities

Life Makers, EELU Chapter – Head of PR (2022 – 2023)

Microsoft Learn Student Club (LSC), EELU – PR Member (2023 – 2024)

Google Developer Student Club (GDSC), EELU Assiut – Head of PR (2023 – 2024)

Awards

- Finalist - IoT Egypt Challenge 2024 (Smart Agriculture Project)