## Sara Gamil Mohamed

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## **Summary**

Seeking a position as an AI Engineer where I can leverage my expertise in deep learning and computer vision to develop innovative solutions for autonomous systems, while contributing to cutting-edge research in real-world applications.

### **Education**

- (October June 2025) 9-Month Diploma (ITI) Information Technology Institute, (MCIT) Ministry Of Communications And Information Technology, Artificial Intelligence and Machine Learning Track, Mansoura Branch
- (2020-2024) BS Artificial intelligence | Kafr El-Sheikh University | Major: Al & Machine Learning | GPA: 3.77

### **Internships**

- (July September 2024) BMI Data Scientist Specialist intern ,Digital Egypt Pioneers Initiative (DPEI)
   @ AMIT
- (July September 2023) Power BI summer Training in (ITI) Information Technology Institute ,(MCIT) Ministry Of Communications And Information Technology

### **Technical Skills**

- Programming & Problem Solving: Python, Problem Solving, SQL, C, C++
- Mathematics & Statistics: linear Algebra, Numerical Optimization, Statistics
- Data Analysis & Visualization: Data Processing, Data Visualization, Power BI, Matplotlib, Seaborn, Pandas, Numpy, Plotly, Dash
- Machine Learning & Deep Learning: Machine Learning, Deep Learning, Keras, TensorFlow, scikitlearn, CNN, RNN, LSTM, LLMS, GenAI, RAG
- Tools and Technology: Git , Docker

#### Courses

- Supervised Machine Learning: Regression and Classification (Coursera)
- Neural Networks and Deep Learning(Coursera)
- Linear Algebra for Machine Learning and Data Science (Coursera)
- Data Analysis with Python (Coursera)
- Object Oriented Programming(MaharaTech)

### **Projects**

## Arabic-Part-of-speech

**GitHub Link** 

Tools: Hugging Face Transformers, DataCollatorForTokenClassification, seqeval, TensorFlow
Fine-tuned an Arabic BERT model for token-level part-of-speech tagging using the Universal
Dependencies treebank. Implemented data parsing, subword alignment, and dynamic batching to
achieve high accuracy and F1 on held-out test data. Deployed the final model to the Hugging Face
Hub for easy inference via the pipeline API

Hate of Speech GitHub Link

Tools:Python, TensorFlow/Keras, NLTK, NumPy, Pandas, Streamlit
 Develop Streamlit web application for real-time hate speech detection using RNN, LSTM, and
 Bidirectional LSTM models to classify user input and reduce online toxicity.Implemented
 comprehensive text preprocessing (tokenization, stop-word removal, padding) and an interactive
 UI with confidence-bar visualizations and clear "Hate Speech" vs. "Not Hate Speech" labels.

## **Obesity Risk Classification**

**GitHub Link** 

• **Tools**: Python, Scikit-learn, XGBoost, Random Forest, Logistic Regression
Built a multi-class classification model to predict obesity levels based on health and lifestyle features.

Preprocessed imbalanced data, performed feature scaling and model tuning. Achieved high accuracy with F1-score optimization using Random Forest and XGBoost.

# **Text Clustering on 20 Newsgroups**

(GitHub Link)

Tools: Python, Scikit-learn, TF-IDF, KMeans, PCA, t-SNE
 Performed unsupervised clustering on the 20 Newsgroups dataset. Applied TF-IDF for feature extraction, dimensionality reduction with PCA and t-SNE, and multiple clustering techniques (KMeans, Agglomerative, DBSCAN). Evaluated clusters using Silhouette Score and Purity Score.

### SkinScanTech Application ( Graduation Project ):

(GitHub Link)

- Tools: Python, TensorFlow, Keras, CNN, Transfer Learning, EfficientNetB0

  Developed a mobile application that detects and classifies skin conditions, burns, and skin cancers using AI. Integrated a chatbot for user assistance and first-aid guidance
- My Role: Focused on dermatological condition detection by preparing and cleaning image datasets (97%), applying preprocessing techniques (88% enhancement), and training pre-trained CNN models, achieving 99% accuracy in classification

### **Power BI for Sales Dashboard:**

(GitHub Link)

 Tools: Power BI ,Power Query Built an interactive dashboard to analyze sales trends, customer segments, and profits using advanced visuals and 90% data transformation.

### **Certificates**

### AI & Machine Learning:

•	AI & Data Science- IBM Data Scientist	DEPI
•	Neural Networks and Deep Learning	Coursera
•	Supervised Machine Learning: Regression and Classification	Coursera
•	Linear Algebra for Machine Learning and Data	Coursera

## Data Analysis:

•	<u>Data analysis</u>	Udacity
•	Business Analysis	ITI
•	Data Analysis with Python	IBM
•	Database Fundamentals	MaharaTech

# **Activities & Competition**

- (Nov 2022 Jan 2023) Data Structure and Algorithms member in Google Developer Student Club(GDSC) Activity, Kafr Elsheikh branch.
- (Oct 2021 Jan 2022) Machine Learning member in Institute of Electrical and Electronics Engineers (IEEE) Activity, Kafr Elsheikh branch
- (26 May June 2022) International Collegiate Programming Contest (ICPC) Competition

#### **Personal Skills**

Communication Skills, Negotiation, Persuasion, Teamwork, Positive Attitude, Innovation

### Languages

• Arabic (Native)

English(C1)