

# Youssef Mohamed

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## Education

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### Egypt-Japan university of science and technology | 2021-2025

- B.S in Computer science and information technology GPA: 3.68 Rank: top 5%

Relevant courses: Neural Networks, Data science, Image processing, Intelligent systems and Algorithms

## Publications

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- Recurrent Neural Networks (RNNs) to improve EEG-based person identification ([link](#))
- A Review of Methods Employed for Forensic Human Identification ([link](#))
- ARASPIDER: DEMOCRATIZING ARABIC-TO-SQL([link](#))
- Arabic text sentiment analysis and emotion classification using transformers
- Advanced deep learning techniques for pornography addiction detection using electroencephalogram (EEG) signals.

## Experience

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### Applied scientist intern | Microsoft - Cairo, Egypt

JUL 2023 - OCT 2023

- Conducted a thorough review of research on emoji prediction from text
- Collected and prepared datasets for English text labeled with emojis
- Fine-tuned transformer model for emoji prediction, Improving the top3 F1-score by 7%
- Developed tools for model quantization, testing, and deployment using python
- Worked on enhancing the accuracy of the emoji search using text model

### Machine learning intern | EME Innovation hub - Alexandria, Egypt

AUG 2022 - SEP 2022

- Cleaned and prepared a real dataset of the academy students' names and their gender to be ready for machine learning work
- Trained a machine learning model for gender prediction using names using decision trees algorithm with test accuracy 85%
- Developed a real time deep learning model for tomato leaf detection using CNN

### Machine learning intern | Technocolabs - Remote, India

OCT 2022- NOV 2022

- Applied feature engineering and Exploratory data analysis on Analyzing Credit Risk on European Peer to Peer lending Firm Bandora dataset
- Developed two machine learning models using logistic regression and Random Forest Classifier with accuracies 92% and 93% respectively for the same dataset

### Data science Researcher | Summer STEM Institute - Remote

JUN 2020 - AUG 2020

- Attended 6 sessions/week sessions about Machine learning and data science, and consolidated knowledge by solving programming labs using Python.
- Presented 2 weekend challenges about marketing and business (Zoom between necessity and entertainment, Africa, middle East and Education)
- Chosen as one of the program's spotlights and an article about me had been posted on the official website of the program

## Projects

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### Head Movement controlled Wheelchair with personal assistant

- Trained a deep learning model to detect the movement of the head in the (x,y,z) plane using python
- Implemented a personal assistant to help the patient to send emails, know the news or google something using voice commands
- Programmed the Arduino software using C Arduino to communicate with the python program to move the chair

### ResuBERT: a Resume Classifier Using BERT

- Collected 13000 resumes images from google and Bing Images for 45 Jobs
- Developed a python script for efficient OCR for the Images
- Cleaned the extracted text and prepared it for model training
- Implemented BERT classifier achieving 90% accuracy in categorizing resumes to respective job types.

### **Sales Chatbot for Retail Company**

- Created a conversational AI sales chatbot leveraging ChatGPT-4 to assist customers in a retail environment.
- Developed and tested prompt scenarios and test cases to ensure the bot's effectiveness in handling customer queries and providing accurate responses.

### **Juice shop management system**

- Designed the User interface using windows forms and Guna widgets.
- Coded the backend of the application using C# DOTNET
- Coded the database using MySQL server

### **Al-Awad dating app: A Python-Powered Dating App**

- Developed a web dating app using Python Django.
- Created a Python package to work with Oracle database.
- Designed frontend with HTML, CSS, and JavaScript.

## **Volunteering and extracurricular activities**

- Head of Science and Technology Committee, E-JUST Student Council
- Vice Head, E-JUST Computer Science Club
- IT Specialist, STEM Egypt IT Team
- Content Creator, Empire Tech YouTube Channel
- Head of PR Committee, Local Hack Day' 19

## **Awards**

- Awarded NASA Space Apps' 22 People Choice Award.
- Earned Third place in Junior Category Micro Mouse' 19 Competition.
- Achieved Third place in Beta Academy Robotics Competition' 2019.

## **Skills**

**Python, C/C++, C#, HTML, CSS, Arduino c, Keras, Tensor flow, pytorch, NumPy, HuggingFace, Gradio, Oracle, Unix/Linux Operating Systems**