

# Islam Abd\_Elhady

Machine Learning Engineer & Instructor

## About

Computer Science student at the Faculty of Computers and Information, Assiut University with a fervent interest in utilizing machine learning, deep learning, data science, and data analysis to create innovative solutions. Proficient in various programming languages, including C, C++, Java, C#, and Python, I possess valuable problem-solving skills and hands-on experience in ASP.NET MVC and Flask. Beyond technical expertise, I excel in teaching, work cooperation, and team leadership. Currently working as a Programming & AI Instructor, I teach children programming in languages such as Scratch and Python, imparting knowledge on artificial intelligence. Additionally, I am passionate about fostering the next generation's interest in technology and education, and as a Programming Educational Content Creator for Kids and Teens, I develop engaging content to teach Python programming concepts to young learners. Eager to collaborate with talented professionals and contribute to meaningful advancements in the field of computer science.

## Experience

### Programming Educational Content Creator for Kids and Teens using Python language

Tweet Kod | 2024.03 – Present

I create programming educational content for kids and teens in the Python language. I am responsible for the practical application of the ideas that were explained and setting questions after each unit (quiz) and the graduation project for the courses.

### Programming & AI Instructor

Future kids & Codemy | 2024.01 – Present

I work as a Programming & AI Instructor for children from 6 to 20 years old. I teach them programming in different programming languages such as Scratch and Python. I also teach them artificial intelligence.

### Director of Research & Development Committee

ACM Assiut University Student Chapter | 2023.10 – Present

### Machine Learning Instructor

Student Union of the Faculty of Computers and Information - Assiut University | 2023.9 – 2023.11

I taught a Machine Learning course in cooperation with the Student Union of the Faculty of Computers and Information - Assiut University, and I explained the following:

- Python Basics
- Packages (Numpy, Pandas & Matplotlib)
- Overview Of Machine Learning
- Regression Model
- Gradient Descent
- Multiple Linear Regression
- Gradient Descent in Practice
- Classification With Logistic Regression
- Cost Function & Gradient Descent For Logistic Regression
- The Overfitting Problem
- Machine Learning With Scikit-Learn, Practices and Projects
- Introduction to Neural Networks

## Contact

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[LinkedIn](#)

[GitHub](#)

## Education

### ASSIUT UNIVERSITY

4rd Year Student in Computer Science,  
Faculty of Computers and Information  
2020 – 2024

## Skills

### Programming Languages

- C
- C++
- Java
- Python
- C#
- PHP
- MATLAB
- Scratch
- HTML

### Conceptual Knowledge

- Object Oriented Programming
- Data Structures & Algorithms
- Compilers
- Artificial Intelligence
- Machine learning
- Deep Learning
- Computer Vision
- Data Analysis
- Embedded Systems
- Computer Networks
- Database: SQL
- Git & GitHub
- Calculus
- Linear Algebra

## Technologies

In addition, I explained and implemented many projects, whether from scratch or using the Scikit-Learn library during the course period.

## Certificates

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### Advanced Learning Algorithms

DeepLearning.AI | 2023.09

[Certificate link](#)

### Deep Learning with PyTorch : Image Segmentation

Coursera | 2023.09

[Certificate link](#)

### Embedia Competitive Programming Competition

Embedia | 2023.08

[Certificate link](#)

### Mathematics for Computer science

BIO CODE Assiut University | 2023.08

[Certificate link](#)

### Supervised Machine Learning: Regression and Classification

DeepLearning.AI | 2023.03

[Certificate link](#)

### Python Programming Basics

MaharaTech | 2023.02

[Certificate link](#)

### Database Fundamentals

MaharaTech | 2023.02

[Certificate link](#)

## Projects

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### Heart Attack Analysis Prediction using ANN

This project involves the analysis and prediction of heart attacks using Artificial Neural Networks (ANN). The goal is to develop a predictive model that can accurately identify the likelihood of a heart attack based on various health metrics and patient data.

[GitHub link](#)

### Credit Card Fraud Detection using Decision Tree

Credit Card Fraud Detection using Decision Tree & Trees Ensemble (Random Forest & XGBoost).

[GitHub link](#)

### Titanic Survivor Prediction

Titanic Survivor Prediction using Random Forest.

[GitHub link](#)

### Neural Networks for Handwritten Digit Recognition Multiclass Classification

- ASP.NET MVC
- Flask
- scikit-learn
- TensorFlow
- PyTorch
- OpenCV
- Unity

## Personal Skills

- Problem Solving
- Self Learning
- Teaching
- Communication
- Teamwork
- Leadership

## Languages

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- Arabic - Native
- English - C1

Use a neural network to recognize the hand-written digits 0-9.

[GitHub link](#)

### **Amaze Game Using The Hill Climbing Algorithm**

I built an amaze game as an example to explain moving or directing robot navigation using the Hill Climbing algorithm and its branches. In this game, you will play the role of a robot trying to reach the goal in a text maze. You have to think smartly to guide the robot through the maze and reach the goal without crashing into the walls.

[GitHub link](#)

### **Cars Prices Prediction with Flask**

Cars Prices Prediction Using Machine Learning and Deployment the model with Flask.

[GitHub link](#)

### **Heart Failure Prediction using Trees Ensemble**

Heart Failure Prediction using Decision Tree & Trees Ensemble (Random Forest & XGBoost).

[GitHub link](#)

### **Breast Cancer Classification with Neural Networks**

Use Neural Networks to classify Breast Cancer as Benign or Malignant.

[GitHub link](#)

### **SONAR Rock vs Mine Prediction**

SONAR Rock vs Mine Prediction using Logistic Regression.

[GitHub link](#)

### **Company System With Distributed Database**

Company System With Distributed Database using GO Project Description: Distributed Database Server and Client in Go.

[GitHub link](#)

### **Machine Learning Algorithms From Scratch**

Machine Learning algorithm implementations from scratch.

[GitHub link](#)

### **SKlearn Datasets Model Test From Scratch**

Testing models using the datasets in the scikit-learn library.

[GitHub link](#)

### **Image processing Project Steganography**

Hiding an image inside another using Python.

[GitHub link](#)

### **Blood Bank Management System MVC**

Blood Bank Management System with MVC.

[GitHub link](#)

### **Skip List**

Skip List Using Java.

[GitHub link](#)

### **Embedded Lock System**

The Embedded Lock System is a collaborative project designed to implement a secure lock system. The system utilizes Proteus 8 Professional for simulation and CodeVisionAVR Evaluation for programming the ATmega16 microcontroller. Written in the C programming language, the system encompasses three main functionalities: opening the door, setting a new passcode (PC), and accessing administrative features. The project is organized into three distinct parts, with each part expertly handled by different contributors.

[GitHub link](#)

### **Snake Game 3D**

3D Snake Game with Unity.

[GitHub link](#)

### **Endless Runner Game**

An endless runner game like subway or temple run with Unity, where the player will run in one direction switching between lanes with obstacles in the opposite way.

[GitHub link](#)

### **College System**

First OOP project (FCI system) 2022 Console application that stores and organizes data about students, professors, technicians, workers, instructors, and administrators in the university. I was the project leader; I implemented a large part of it. Implemented many concepts of object-oriented programming like composition, inheritance, and polymorphism. The implementation of this system was by the Java programming language.

[GitHub link](#)

### **Ping Pong Game**

Ping Pong Game using python.

[GitHub link](#)

## **Achievements**

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- Obtaining third place in the first scientific hackathon at Assiut University (SolveX) in the field of engineering sciences by manufacturing a **MINE-DETECTION-DRONE** that works with artificial intelligence, and obtaining first place with the same idea in the Green Dream Conference at Assiut University in the field of Development and Egypt's Vision 2030.
- Participation in the ECPC 2022 competition.

[Certificate link](#)