# MAHMOUD ELGAZZAR

#### **S**OFTWARE **E**NGINEER

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#### **A**BOUT

- As a Software Engineer I am looking for developing and maintaining software products that could help people to make their life easier.
- keep tracking of any technology already exists or may appear in the future related to web development
- Interested in volunteering and helping other to empower their level to grow as I was working as mentor at ACMascis where I used to help newcomers how to code and problem solving skills.

#### **E**DUCATION

#### Bachelor's Degree in Computer Science, Ain Shams University

- Expected Graduation Year: Jun 2020.
- Relevant Coursework: introduction to programming, Object Oriented Programming, Data Structure, Analysis and Algorithm Design, Information system, System Analysis and Design, Database Management System, Operating System, Computer Graphics, Computer Architecture, Artificial Intelligence, Software Engineering, Image processing, Machine Learning, Computer Network, Compiler theory, Modeling and Simulation.

#### **EXPERIENCE**

- Algorithms training at ACM ASCIS Student Chapter

Ain Shams, University MAR 2016 - MAY 2016

#### As a Trainee

- The training included Couple of famous Data-Structures used in Competitive, Algorithms over Graphs, Dynamic Programming, Number Theory, Computational Geometry, String Processing, and Search Techniques.
- -Introduction to Business Analysis workshop at Positive Edge for ICT Consulting and professional services Jun 2019 – Jun 2019
- Software Engineer at BagSoft. Oct 2019 - Present. Part-time
  - At BagSoft we develop and maintain software products based on .Net framework and integrate these software products with RFID API to deal with gathered data from RFID devices and store it in databases and deal with this data using Microsoft Sql server.

## **ACADIMIC PROJECTS**

# **Image Paragraph Captioning**

Python, Google Colab, Deep Learning Techniques

• The Output of this program is to generate a paragraph accurately describing the contents and activities happening in any given image. To do that we created a combination of models which are the CNN model used for object detection and feature extraction, two LSTM models one for sentence generation and the other one for word generation for every sentence.

# **Mobile App Success**

Python, Google CoLab, Anaconda

- It is a Machine Learning module that can predict the rate of the app out of five.

  This program consists of two main modules to predict how a specific app will gain success depending on some features which we selected for the prediction process.
  - Two modules we used for our program.
    - 1- Regression module for continuous variable.
    - 2- Classification module for categorical variable.

[ProjectCode]

# **Tiny Server Implementation**

C#, Visual Studio, socket programming

• It is a simple server we created to apply some of the computer network principles we have learned. The output of this program is if you need to request a specific page which it's stored in the server, the server will respond to you with this page to display using Google Chrome for instance.

[ProjectCode]

#### **Hand Written Detection**

Matlab

- Hand written detection project based on Morphological techniques in the Image processing field. Simply it takes an image contain a text and finds the three output of the functions below.
  - -This project has three main functions:
    - Characters Count
    - Words Count
    - Lines Count

[ProjectCode]

# **Intelligent Scissors**

C#, Visual Studio

It is windows form application, takes an image and let the user selects a specific object through clicked surrounding the objects and at every two points the program draws live wire based on the shortest path between them using Dijkstra Algorithm, finally you can crop this selected object alone through flood fill and DFS algorithm.

[ProjectCode]

# **Map Routing**

java, net Beans platform, File System

- the main idea of this project is the same of google map but in a simple way, the project takes the location of the user and the destination location, then gives the user the shortest path based on Dijkstra algorithm.
- [ProjectCode]

# **Image Processing**

C#, Windows Form, Assembly Language

Included in this project two main functions

- 1. Sobel Edge
- 2. Histogram Equalization

- 1. Sobel Edge: Sobel operator is used to extract edges from a given image. Extracting edges from an image is useful to extract some important features that can be used later in many computer vision related tasks such as: detecting license plate, face detection, object detection and so on
- 2. Histogram Equalization: Histogram equalization is a method in image processing of contrast adjustment using the image's histogram.

  This method usually increases the global contrast of many images, especially when the usable data of the image is represented by close contrast values.
- [ProjectCode]

# **E-Government System**

C++, CLR for GUI, OOP concepts

• The E-Government system is an efficient, effective, public service capable of adjusting any changes in the government

structure, managing resources wisely, providing distinguished services to citizens and continuously interacting with them.

[ProjectCode]

# **Criminal Investigation**

C#, Windows Form, File System

a criminal investigation tracker system that tracks the investigation status of criminal cases with logs and
predicts primary suspects. The system needs logs of a case which includes case summary, case type (murder,
forcible rape, homicide, etc.), people involved, disputes, past criminal history of those involved, Items
recovered on scene, assigned officers to these crimes and other details.

# **Online Shopping Store**

C#, ASP.NET

- A simple website like "Amazon" and "souq.com".
   It can display all products in the database, let users register and login as a person or a company, you can use it to buy any product or sell products.
   Also, you can search for a specific product.
- [ProjectCode]

## **Tourism Management System**

C#, ADO.NET

• A simple system for the tourism industry, this system can show all tourism places in Egypt and all transportations to this places. let users register and login into this system. tourist can book a specific trip and save his time and efforts.

## **Hung man Game**

C#, File System

A simple game made with windows form application. this game displays a hidden word for the player and
the player should guess what is the character of this word.
 during guessing process, if the player wrong in the guessing process, hangman will start to appear part by
part.

## Skills

## Programming language

- C++
- java
- C#
- Git
- Python
- HTML, HMTL5
- CSS, CSS 3
- Javascript
- Asp .net (MVC)

#### **Object Oriented Programming**

- Very good knowledge with main concepts of it like
  - 1. Encapsulation
  - 2. Abstraction
  - 3. Polymorphism
  - 4. Inheritance

#### Data Structure and Algorithm

 Very good knowledge with all data structure that is using in competitive programming and algorithms.

#### Problems solving skills

- Solved many problems on different online judges
- Participated in local contest at Ain Shams university
- Participated in many online contests specially on codeforces and codechef.

#### Others

- Good listener
- Diplomatic
- leader
- helpful guy
- good at explanation a specific topic
- teaching

# **VOULNTER JOB**

• Trainer at ACMASCIS student chapter, To help newcomers how to code and problem solving skills.

# **LANGUAGES**

- Arabic (Native or bilingual proficiency)
- English (Professional working proficiency)