

Mustafa Choueib

SOFTWARE ENGINEER

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Education

MCMaster UNIVERSITY

Hamilton, Ontario

B.SE IN SOFTWARE ENGINEERING AND MANAGEMENT, GPA: 3.0/4.0

- Fifth year, expected graduation April 2023
- Entrance Scholarship (90+ average)
- Engineering and Management pairs an undergraduate engineering degree with a core business education

Skills

Programming Languages C#, C++, Java, HTML, CSS, JavaScript, Python, C, SQL, BASH, Latex, Visual Basic for Applications

Tools and Frameworks Unity2D, Unity3D, Unreal Engine 5, Matlab, Maple, Verilog, Git, JUnit, Pytest

Spoken Languages English, Arabic

Work and Leadership Experience

Process Automation Analyst

Hamilton, Ontario

ARCELORMITTAL DOFASCO

2020 - 2021

- Automated manual processes and applications using a variety of languages.
- Monitored, maintained and updated system integration.
- Completed and integrated a data collection system, PhaseTrack, used to create, process and store data relevant to operations.
- Created scripts to automatically produce daily, weekly, and monthly reports and email them to the necessary recipients.

Manager

Port dover, Ontario

PIONEER ENERGY

2017 - 2019

- Handled complaints, stock, and processing orders.
- Provided information about the organization's products and services.
- Managed customer complaints to ensure each customer had a joyful experience.

Projects

ThreatDetect

JAVA

- ThreatDetect is a project that uses a government issued database that includes information on every incident of gun violence in the United States from 2013-2018.
- Use of a Google geocoder API in order to convert an address into longitude and latitude coordinates.
- User inputs a state, address, and integer radius (in km), and the program will return information based on the incidences that reside in the radius.
- This program uses Dijkstra's algorithm, red-black trees, and several world renowned algorithms.

Image Mutation Algorithm

C

- This project was a final assignment for my Principles of Programming class. The language used in this is C and runs on terminal.
- Thorough analysis and use of memory allocation and de-allocation. Use of a genetic algorithm in order to display an image that resembles a given target image.
- Algorithm creates a population of images where each entity has randomized pixels. It will then sort the entire population based on fitness.
- It will repeat the process with the bottom 75 percent of entities by further randomizing the pixels. It will eventually display the image with the lowest fitness to a new .ppm file.

Tower Defense Game

C# AND UNITY2D

- Created enemy spawn points and fire rate mechanics.
- Implemented real time health and scoring systems and designed user interface, scenes, and Sprites using Unity2D.
- User places different types of towers as defense and enemies are spawned. Different towers and enemies have varying damage and health.