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.