Saif Fadhel

Software Developer

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Skills

Programming Languages - Python, Java, C, C++, HTML/CSS, JavaScript, SQL, Assembly (NASM), Kotlin, MATLAB
Technologies and Concepts - GIT, Unity (2D/3D), Databases, LaTeX, Bash, Doxygen, Android Studio, Node.js, React, AWS, Jira
Algorithms and Data Structures - Stacks, Queues, Bubble Sort, Quick Sort, Depth-First Search
Linux-Based Developer Tools and Debugging Environments - GCC, GDB
Microsoft Office Administration Tools - Microsoft Word, Microsoft Excel, Microsoft PowerPoint

Education

McMaster University - Bachelor of Engineering (B.Eng.) - Software Engineering (Co-op) *September 2017 - April 2022*

Relevant Coursework:

- Engineering Computation (A+)
- Software Project Management (A+)
- Software Design (A+)
- Software Engineering Capstone (A+)
- Software Testing (A)
- Computer Networks and Security (A-)

Experience

Ericsson - 5G Software Test Developer - Ottawa, ON K2K 2V6 *January 2021 - December 2021*

- Verified the deployment and stability of 4G/5G Network Radio Software on over 50 tracks by applying quality management skills
- Utilised a test-driven development approach to create robust test cases and applied principles of agile methodology
- Designed and deployed automated test scripts for clusters of nodes on Jenkins to monitor the success of builds

Projects

Fibonacci Fractal Generator (C) - GitHub *February 2019*

- Created a program that generates Fibonacci fractals from n values of 30 to 100 within a 2 to 20 minute time interval
- Stored and represented fractals as bitmap images in order to preserve high resolution image quality
- Utilized a user's specified image width, height, and fibonacci fractal start and end points to accurately depict the fractals

PPM Image Filter Convolution (C) - GitHub *March 2019*

- Developed a program that receives a PPM image as input and applies a kernel filter to it using convolution to produce an output image
- Included support for many different image processing filters including the mean filter, Gaussian blur filter and the sharpen filter
- Implemented memory management techniques to allow images with up to 3840x2160 resolutions to be generated in under 3 minutes

Personal Website (HTML/CSS) - GitHub *January 2020*

- Built a website using HTML and CSS from scratch utilizing bootstrap elements and hosted on GitHub at https://saiffgit.github.io
- Constructed an interactive featured projects section demonstrating the various personal projects that I have previously worked on extensively
- Used Adobe Photoshop to render custom image icons representing projects and supplied them with visual animations using CSS

CrimeCheck (Java) *March 2020*

- Utilised the depth-first search algorithm to scan all of New York City for safe paths civilians can take to avoid crime-ridden areas
- Lead a group of four colleagues to effectively divide the required implementation amongst ourselves based on our areas of expertise
- Collaborated with the four individuals with each section of the project including the front-end, and back-end of the application

Connecting Autonomous Vehicles (Python) - GitHub - DevPost *September 2020*

- Achieved first place in Delta Hacks VI for creatively using environmental data to connect autonomous vehicles using Innovation Factory's system
- Helped train a Deep Learning Yolo model using a CNN to identify snow patches to reduce the speed limit of an Autonomous vehicle dynamically
- Collaborated with team members to follow the Agile Methodology during the project's development

Extracurricular Activity

McMaster AI Club - Core Member *October 2019 - 2020*

- Attended various Artificial Intelligence tutorial sessions and engaged in Google Colab coding sessions
- Learned about the mathematics used in convolutional neural networks

Honors & Awards

Delta-Hacks VI - McMaster University's Annual Hackathon - 1st Place *February 2020*

- Placed first for the ITE Challenge in McMaster's Annual Hackathon, Delta-Hacks VI