Mehdi Esmaeilzadeh

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Summary

Highly motivated and passionate computer science graduate with extensive programming skills including C/C++, Java and Python, seeking a career as a software developer where I can apply my technical expertise to positively contribute to the organization's objective.

EDUCATION

Simon Fraser University, Vancouver BC   09/2019 - 04/2023

B.Sc. in Computing Science   Cumulative GPA: 4.0/4.33

Technical Project Experience

Maze Generator and Pathfinder project   08/2023 – 09/2023

Developer, Personal Project

- Developed a maze generation algorithm capable of creating diverse mazes of varying complexity.
- Implemented a real-time visualization feature that allows users to observe a step-by-step pathfinding process.
- Designed an intuitive user interface that allows the users to customize maze parameters and pathfinding in real-time.

Project Portfolio Link: https://mehdie79.github.io/MyPortfolio/#maze_generator

Online Multiplayer Chess Game   07/2023 – 09/2023

Developer, Personal Project

- Leveraged knowledge of TCP stack and networking internals to implement the multiplayer functionality of the game through socket programming.
- Utilized the pygame library to design and develop the game's user interface (UI) and core functionalities.
- Implemented an AI opponent using the min-max algorithm, providing users with a challenging computer opponent for single-player gameplay.

Project Portfolio Link: https://mehdie79.github.io/MyPortfolio/#chess_game

Beaglepod: Music Player on the Beagle Bone   02/2023 – 04/2023

Developer, Embedded Systems (CMPT 433)

- Successfully Implemented a music player capable of playing various audio formats on the Beaglebone
- Designed and implemented crucial modules, including a shutdown module, an efficient song manager, and a user-friendly menu manager, leading to improved application stability and an enhanced user experience.
- Utilized the project as a learning opportunity to gain hands-on experience working with range of hardware components. This experience helped me understand tools and devices commonly used in embedded development

Project Portfolio Link: https://mehdie79.github.io/MyPortfolio/#beaglepod

Honours and Awards

- **Scotiabank Student Scholarship In The Faculty Of Applied Sciences,** Fall 2022, Awarded to students who have shown outstanding volunteer service involvement at the University
- **President Honour Roll,** Spring 2022
- **SFU Alumni Scholarship,** Summer 2022, Awarded to students for excellent academic performance
- **Deans Honour Roll**, Fall 2021, Spring 2022, Summer 2022 & Fall 2022
- **Undergraduate Open Scholarship**, Fall 2021, Spring 2022, Summer 2022 & Fall 2022, Awarded to students who have completed at least 30 SFU standard graded units with a CGPA of 3.67 or higher
- **Top 5% in faculty of applied science**, Spring 2021
- **International Summit Scholarships (Transfer)**, Fall 2020, Awarded to International Students who have a CGPA of 3.70 or higher

Unpaid Volunteering

CS Peer Tutor, Simon Fraser University, Vancouver   01/2022 – Present

- Tutored 5 Computer science courses at Simon Fraser University for about 140 hours
- Helped students to better understand the concepts and develop problem-solving skills which resulted in tutees achieving higher grades in their courses

IT Squad, Fraser International College, Vancouver   03/2020 – 12/2020

- Helped students with technical issues by problem-solving and troubleshooting to support my community by relieving technical stress from students

Related Course Work

Embedded Systems - CMPT433 (Received Grade: A), Spring 2023

- Gained hands-on experience developing embedded applications on a Beagle Bone Green
- Embedded application testing and cross-platform debugging

Database Systems II - CMPT454 (Received Grade: A-), Fall 2022

- Used tools such as CMake, Git, Valgrind, gprof, and GDB throughout the course project
- Developed Multithreaded programming skills by implementing a database storage engine

Data Communication and Networking - CMPT371 (Received Grade: A), Summer 2022

- Developed an online multiplayer game using Python
- Gained knowledge in networking internals such as TCP IP stack, protocols, DNS, and Sockets

Operating Systems - CMPT300 (Received Grade: A), Fall 2021

- Developed a deep insight into CPU, thread, processes and operating system concepts
- Worked and developed several multithreaded applications by completing the assignments and projects

SKILLS

- **Programs:** Visual Studio, VMware, Microsoft SQL, Git, Linux/Unix, Bash, GDB, Valgrind, CMake
- **Languages:** C/C++, Java, Python, SQL, HTML & CSS, Node.js, Java Script