



CALLUM BARKER

Delta, BC | (778) 985-2432 | callumb@sfu.ca | [GitHub](#): | [LinkedIn](#):

SKILLS

TECHNICAL

- Programming Languages: **C/C++**, **Python**
 - Familiar With: **React/JSX**, **CSS**, **HTML**
- Operating Systems: **Windows**, **Linux**, **OS X**
- Tools: **Microsoft Visual Studio**, **Github/Gitlab**, **Sublime**, **PyCharm**, Adobe Photoshop, Microsoft Word, Powerpoint

TRANSFERABLE

- Strong communication and leadership skills
- Focussed work ethic and highly punctual
- Effective problem solving
- Self managing
- Organized and detail oriented

ACADEMIC PROJECTS

FLIXLIST WEB APP

Introduction to Software Engineering (CMPT 276)

03.2021

- Developed a web app using React/JSX, CSS, and MongoDB in a team of 5 students to allow users to search, rate, and review movies and share these reviews with friends
- Retrieved movie information using RapidAPI Movie Database API
- Worked in an Agile environment with teammates using weekly sprints and continuously integrated work to Gitlab

HEAPSORT

Data Structures and Programming (CMPT 225)

11. 2020

- Implemented an array-based heap and heapsort using C++, resulting in a perfect grade
- Applied the concept of object-oriented programming to produce organized and reusable code

PERSONAL PROJECTS

PATHFINDING VISUALIZER

<https://github.com/cbarkr/pathfindingvisualizer>

01. 2021

- Produced a functional visualizer of A*, Dijkstra, and BFS pathfinding algorithms in python in which the shortest path between nodes is displayed to the user
- Modeled the behaviour of the algorithms in an interactive Pygame window, allowing users to select start, end, and barrier nodes
- Utilized Pygame menu to create a simple UI in which the user selects options such as algorithm and amount of random barrier generation, as well as displaying instructions and results if prompted

HASH TABLE ADT

10. 2020

- Handled hashing collisions using separate chaining to accommodate for an arbitrary number of elements



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WORK HISTORY

BOYS AND GIRLS CLUB – LADNER, BC

02. 2019 – 09. 2020

Activity Leader

- Supervised large groups of children in activities within and outside of our facility
- Incorporated elements from STEM fields into activities to promote learning in an interesting way

LONDON DRUGS – LADNER, BC

06. 2017 – 07. 2018

Photo/Electronics Specialist - Sales

- Communicated effectively with customers to provide knowledgeable insight and professional customer service
- Diagnosed and resolved issues with customers computers, mobile phones and other technology
- Proficiency using the London Drugs product database

EDUCATION

SIMON FRASER UNIVERSITY

09.2019 – Present

BSc Computer Science

- Expected graduation in 2024

INTERESTS

COMPUTER HARDWARE

- Built and maintained multiple PC's over the past several years
- Over clocked CPU and partitioned drive to support dual booted operating systems on my personal computer

PHOTOGRAPHY

- Amateur digital and film photographer

GRAPHIC DESIGN

- Enjoy creating designs for personal use

SOCCER

- Played as a goaltender on recreational teams since 2007

CAMPING/HIKING

- Enjoy exploring local and distant mountains in all conditions