Alex Blackwell

alexblackwell.ca
GitHub (github.com/alex0blackwell)
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Email: alex_blackwell@sfu.ca
Phone: 604-767-4611
Vancouver, B.C. Canada

Technical Skills

Languages: C++, Python, JavaScript, C

Technologies: HTML/CSS, Git, Unix command line, jQuery, Node.js, Continuous Integration, Jest testing framework

Applications: GitHub, GitLab, Unity, Adobe Suite, Microsoft Office Suite, VIM, LaTeX, WordPress, Jekyll

Operating Systems: GNU/Linux (Manjaro, Ubuntu, Kali), Windows, MacOS

Personal Projects

Python Projects:

- Desktop Application – "Copy Paste Anything" (code link):
  - Developed a desktop application to extract all text from any selected area of the screen.
  - Utilized machine learning character recognition algorithms to accurately determine selected text.
  - Implemented cross-platform algorithm to automatically save selected text to the clipboard to improve usability.
  - Developed a Graphical User Interface to easily select any portion of the screen with a mouse cursor to improve user experience.
- Terminal command – "Tree" (code link):
  - Developed terminal command to display the file structure from the current working directory.
  - Created algorithm to determine the most common file type utilizing the efficient look up times of a hashmap.
  - Engineered recursive algorithm for traversing the file structure resulting in simplified and readable code.

JavaScript Projects:

- Website – "Merge Sort Visualizer" (code link):
  - Programmed website capable of visually representing the process of a merge sort algorithm.
  - Used Bootstrap to create a responsive and scalable website to work visually on all devices.
  - Implemented asynchronous JavaScript code to add timing events without decreasing the responsiveness of the website.
- Browser Extension – "QR-Code Generator" (code link):
  - Worked in a team to develop a browser extension during the twelve hour Hack-a-thon: System Hacks 2020.
  - Responsible for converting text to a QR-code that is capable of representing a paragraph.
  - Worked on both Chrome and Firefox to deploy the extension to become a product.

C++ Projects:

- Terminal Application – "CSS Minifier" (code link):
  - Developed an algorithm to produce CSS with a lesser file size, reducing website load times and bandwidth usage.
  - Designed the algorithm to allow for all valid styles of CSS formatting to improve usability for all developers.
- Data Structures (code link):
  - Implemented data structures to help understand the abstractions of common data structures.
  - Implemented: binary search tree, singly linked list, queue, red black binary tree, stack, double ended queue, and binary heap.

Technical Work Experience

Freelance Website Developer May to September 2020
Fiverr, Remote

- Worked with clients to develop professional websites which started companies and built online presence.
- Delivered high quality products to clients ahead of schedule, earning an overall rating of five stars.
- Used Bootstrap, JavaScript, HTML/CSS, Git, WordPress and Jekyll to create and improve professional websites.

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Other Work Experience

Skate Instructor September to May of 2016 – 2019
North Vancouver Recreation Commission, North Vancouver, B.C.

- Responsible for teaching children a new skill by clearly communicating and adapting to areas of struggle.
- Created a schedule for groups requiring time management for teaching classes.

Park Ambassador May to September of 2016 – 2019
Capilano Suspension Bridge Park, North Vancouver, B.C.

- Accountable member of a team that interacted with guests to improve customer experience.
- Responsible for calming upset or unnerved guests at the park and providing solutions to their problems.

Extra Curricular Activities

Simon Fraser Competitive Programming Club September 2020 – Present
Simon Fraser University, Burnaby, B.C.

- Program in weekly competitions to improve competitive programming skills.
- Compete against computing science students to improve the speed and efficiency of solving problems.
- Study weekly lectures on algorithms and data structures to learn new methods and improve old methods of solving problems.

Simon Fraser Hacking and Cybersecurity Club September 2019 – Present
Simon Fraser University, Burnaby, B.C.

- Using a Kali Linux virtual machine to take advantage of cybersecurity tools native to the operating system.
- Utilized the Metasploit penetration testing framework to identify vulnerabilities.
- Tested Metasploit commands on the vulnerable virtual machine Metasploitable to ethically learn penetration testing.

Education

Simon Fraser University Burnaby, B.C. Canada
Computing Science; GPA: 3.75 September 2019 – Present

Honours and Awards

Dean's Honour Roll: Simon Fraser University, Faculty of Applied Sciences, Spring 2020 – Present

Simon Fraser University Open Scholarship: Scholarship for academic achievement, Spring 2020 – Present

Second place in Simon Fraser Coding Competition: Hosted by S.F.U. competitive programming club, 02/09/2020

Google Kickstart Top 35 in Canada: Google Kickstart Coding Competition, 22/08/2020

Interests

Open source software development: Enjoy contributing to software on GitHub and creating new projects.

Image recognition machine learning: Amateur photographer and enjoy seeing the combination of two interests.

GNU/Linux operating systems: Spend time trying new operating systems and creating new desktop environments.