

# Abdullah Sherwani

587-973-4221 | [asherwan@ualberta.ca](mailto:asherwan@ualberta.ca) | [linkedin.com/in/abdullah-sherwani](https://www.linkedin.com/in/abdullah-sherwani) | [github.com/Abdullahs1214](https://github.com/Abdullahs1214)

## EDUCATION

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### University of Alberta

*Bachelor of Science in Computer Engineering Co-op - Software Option*

Edmonton, AB

Sep. 2021 - Apr 2026

## PROJECT EXPERIENCE

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### Huffman Tree | Python

Nov 2023 - Dec 2023

- Implemented a data compression and decompression algorithm using Huffman coding, a widely used compression technique.
- Utilized the Python pickle module to develop functions for serializing and deserializing Huffman trees, enabling efficient storage and retrieval of tree structures.
- Employed the bitio library to handle binary I/O, improving the efficiency of reading and writing bits for compression and decompression processes.

### Open Source Project Website | React, Node.js, Firebase, Bootstrap

Oct 2023 - Dec 2023

- Created a website to post and join open source projects through react and node.js.
- Allows users to personalize information pages to display relevant information that employers would see
- Stylistic implementations for all pages of the website are utilized through CSS and Bootstrap.
- Firebase implemented for the database to hold user's profiles and information

### Map Assignment | C++

March 2023 - April 2023

- Parsed a road network text file to construct a weighted directed graph, optimizing data representation.
- Calculated edge weights by determining the Manhattan distance between graph vertices, enhancing accuracy
- Implemented a function to efficiently compute least-cost paths from a given vertex, utilizing Dijkstra's algorithm with a C++ priority queue (binary heap), enhancing efficiency.
- Extended the server code to handle route requests from a client using named pipes, clarifying and optimizing communication.

## WORK EXPERIENCE

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### Lathe Machine Operator

July 2021 – August 2021

*Fine Machine Works*

*Calgary, AB*

- Operated and cleaned the main CNC saw producing 50+ parts per day
- Organized and stored the 50+ produced parts and delivered to coworkers
- Cooperated with coworkers to construct the dimensions of parts made from 10+ unique metals and utilized the dimensions while operating the saw.

### CNC Machine Assistant

July 2018 – August 2018

*Fine Machine Works*

*Calgary, AB*

- Cleaned the 8 large CNC machines, removing all the oil, lubricant and metal shaving remaining inside the machines.
- Collaborated with coworkers to allot 10-20 minutes for machine cleaning.
- Evaluated and assisted in quality control of 100+ products using various tools.

## TECHNICAL SKILLS

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**Languages:** Java, Python, C/C++, SQL, JavaScript, HTML, CSS

**Frameworks:** React, Node.js, WordPress, Bootstrap

**Developer Tools:** Github, Docker, VS Code, Eclipse

**Libraries:** Pandas, NumPy, Matplotlib