

# Mustafa Rushdi

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## Education

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### University of Illinois at Chicago

Bachelor of Science in Computer Science

UIC GPA: 3.78/4

**Relevant Coursework:** Data Structures and Algorithms, Languages and Automata, Program Design II, Program Design I, Programming Practicum, Discrete Math, Calculus I, Calculus II, Calculus III

2021-May 2024

Chicago, IL

## Skills

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**Languages:** C++, C, Html, CSS, Python, JavaScript

**Tech:** Visual Studio Code, Visual Studio, Valgrind, GNU Debugger, Replit

**Languages:** Fluent in English and Arabic

## Work Experience

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### Elegant Distribution

Warehouse Technician

Phone: (708)-430-9353 Address: 10067 S 76<sup>th</sup> Ave Bridgeview IL 60455

June 2021 – August 2022

- Communicating with the staff and identifying bottlenecks or inefficiencies within the warehouse process and implementing solutions to improve work efficiency.
- Managed daily inventory by keeping track of inventory and identifying issues such as overstock or understocked items. While also maintaining and troubleshooting warehouse equipment.

## Projects

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### [Mustafa Personal Website](#) | HTML, CSS, JavaScript

August 2022

- Developed a responsive website introducing myself/background info about me using GitHub to track and sort code flow

### [File Compression Application](#) | C++, VScode

September 2022

- Program that allows the user to compress and decompress various sorts of files such as txt, images etc. using the Huffman algorithm, which significantly reduces the bytes/bits of a file by a third a half or even more
- Program written using OOP principles utilizes maps and a custom HashMap class to store character frequencies.
- Uses a binary tree to create a Huffman encoding tree while using a priority queue to keep track of which nodes to process.

### [My Map Project](#) | C++, VScode

September 2022

- Project that implements a general purpose, templated map class that has similar functionality to the C++ standard library map container. Code written using OOP principles.
- The Map implements a self-balancing threaded BST but without using an AVL or Red-Black Tree instead a Seesaw-Balanced property to maintain balance. Uses an assortment of algorithms to complete specific tasks.
- Project relied on skills like memory mapping, diagramming, testing for multiple edge cases using the Google Testing Framework and optimizing Space Complexity to O(1) and Time Complexity to O(logn)

### [Wordle Word](#) | Python, VScode

April 2022

- The Python project is based on the popular word game called Wordle, where players are given a limited number of attempts as well as time to guess a random word correctly.
- Uses efficient algorithm such as binary search and merge sort for good time complexity
- The project utilizes various data structures, including lists and dictionaries, to store and manipulate the game data.