

Dev Chaudhari

[Email](#) | [GitHub](#) | [Website](#) | [LinkedIn](#)

EDUCATION

University of Western Ontario

Major: Software Engineering

Honors/Awards: Western Scholarship of Distinction, Dean of Engineering's International Entrance Scholarship (\$5000)

Relevant Coursework: Programming Fundamentals for Engineers, Linear Algebra with Numerical Analysis for engineering, Scripting Programming Language, Discrete Mathematics, Algorithms & Data Structure, Software Design and Construction, Digital Logics Systems

EXPERIENCE

Movie Playback Button | *Software Developer*

January 2023 – April 2023

- Collaborated with a team of six to develop a solution for individuals with cerebral palsy to control household smart devices from their wheelchair with minimal hand movement
- Designed a system comprising a joystick and two buttons connected to a programmed Arduino, functioning as a navigation tool for the user's DVD, smart TV, or other monitor devices
- Utilized Python for Arduino programming, creating code enabling the Arduino to interface with smart appliances
- Implemented joystick controls for functions such as pause, play, rewind, forward, and returning to the home screen

Substitution | *Software Developer*

July 2023 - September 2023

- Developed a prototype using C to encrypt a plaintext or to decrypt a ciphertext
- Implemented a key, mapping each alphabet letter to its corresponding encrypted letter, ensuring data security
- The total number of possible key combinations without repeating any alphabet is 4,032,914,611,266,049,317,120,000 (4 sextillion)
- To decrypt the message, the receiver must possess the key to reverse the process and translate the ciphertext to plain text. Without the key, it would take approximately 1.28×10^{17} years to try all the combinations and decrypt the message

Mastermind | *Software Developer*

August 2023 – Present

- Developing a real-life game called Mastermind in C
- Designed for 2 players: codemaker, who sets the pattern, and codebreaker, who cracks the pattern
- Implemented validations for codemaker's input, ensuring it is a 5 to 8 letter word through command-line arguments
- Provided codebreaker with 6 guesses to crack the pattern; the game ends when pattern is cracked or after 6 attempts
- Implemented feedback system using colors:
 - Red indicates the letter is not in the secret word
 - Yellow indicates the letter is in the secret word but in the wrong position
 - Green indicates the letter is in the secret word and in the correct position

Credit | *Software Developer*

June 2023 - July 2023

- Implemented Luhn's Algorithm in Python to validate create card numbers, ensuring accuracy and security
- Developed mechanism to determine whether a card number entered is valid or invalid
- Enhanced the program to identify if the Card is Visa, Mastercard or American Express

Airplane Boarding and Disembarking Application | *Software Developer*

October 2023 – November 2023

- Developed a Java application for efficient all-economy airplane boarding and disembarking
- Created an intuitive interface enabling users to input passenger count and flight stops, subsequently gathering passenger data such as names and destinations to allocate individual seat numbers accordingly
- Implemented a linked list to manage passenger details, facilitating smooth boarding and disembarking processes
- Utilized a linked-list based priority queue for boarding, organizing passengers in the natural order of seat numbers, and employing a FIFO (First In, First Out) approach for rear-to-front boarding
- Employed a linked-list based stack for disembarking, ensuring a LIFO (Last In, First Out) approach, allowing passengers to exit from the front of the aircraft efficiently.

SKILLS & INTERESTS

Programming: Python, JavaScript (React), HTML, CSS, Java, C/C++, TypeScript, SQL, Linux/Bash, Cloud Platforms (GCP, AWS, Azure), GIT(version control), MATLAB

Interests: Long distance cycling, chess, table tennis, sports and athletics, conservation, tech innovation, Hiking, writing

Organizations and Conferences: Software developer at Western Algorithm Trading Club