

# Umar Asif

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## Relevant Skills

**Languages** C/C++, Java, Java Swing, VHDL, Python, JavaScript  
**Technologies/Tools** HTML/CSS, Git, Processing, Visual Studio, Bootstraps, UIPath

## Education

### University of Waterloo

Waterloo, Ontario

B.ASC IN COMPUTER ENGINEERING (HONORS CO-OP)

September 2019 - April 2024 (Expected)

**Relevant Courses:** Fundamentals of Programming, Digital Circuits and Systems, Linear Circuits, Discrete Mathematics and Logic.

## Projects

### Price Point

1ST PLACE AUTOMATED WEBAPP MADE FOR THE **STARTERHACKS 2020** HACKATHON

January 2020

- Developed an automated webapp which **scrapes data** from various eCommerce websites to display various links to products.
- Data scraping **automation** process done utilizing **UIPath** and a beautiful **UI/UX** created with **JavaScript, HTML and CSS**
- 1st place** at StarterHacks for best UIPath application amongst **2000+ participants**.

### Sudoku Solver (Python)

GUI SUDOKU SOLVER

March 2020

- Developed a Sudoku Solver by implementing the backtracking algorithm using **Python**.
- Responsive **GUI** displaying the backtracking algorithm solving the board in real time implemented utilizing the **PyGame** library.
- User features implemented, such as setting board defaults, view algorithm in real time using **multi-threading**, and resetting board.

### Pokemon Battle Simulator (Java)

A GUI-BASED TWO PLAYER GAME ON **JAVA**

December 2019

- Developed a two player game using **Java**.
- Designed and created a responsive **UI/UX** using **Java Swing** using multiple sprites and animations.
- Uses **File Management** to read character data. Ability to easily add new characters.
- Flexible program able to add new characters by editing text file to create a Realistic Pokemon Battle simulator.

### Pokemon Battle Simulator (C++)

A TEXT-BASED TWO PLAYER GAME ON **C++**

December 2019

- Developed a text-based two player game using **C++**.
- Realistic and accurate Pokemon Battle Simulator able to read character data from text files.

### Autonomous Vehicle

DESIGNED AN SMALL-SCALED AUTONOMOUS VEHICLE

December 2018 - March 2019

- Organized and Led** team of 6 members to **UofT Engineering Idol Competition**.
- Created an autonomous vehicle using **Arduino**, able to maneuver around a track.
- Oversaw and led design process as **Engineering Club president**.

### RC4 Encryption / Decryption Software (C++)

**C++** COURSE PROJECT

October 2019

- Encrypts and deciphers strings use **RC4 algorithm**, using ASCII armour to safely and reliably encrypt messages.

### ETF / transaction history sorter (C++)

TRANSACTION SORTER ON **C++**

December 2019

- Used **linked lists** and **pointers** to dynamically create a list of **C++**. Able to access and read a text file to retrieve stock data.

## Related Experience

### MCI Engineering Club

Etobicoke, Canada

PRESIDENT

September 2017 - June 2019

- Organized engineering workshops at school as president.
- Managed a budget to create **engineering prototypes** run workshops for **over 40 students**.
- Led group of 6 students to compete in the **UofT Engineering Idol Competition** involving **over 20 schools**.

### Pizza Pizza

Toronto, Canada

CASHIER/ COOK

Summer 2019

- Followed safety and health standards to ensure customer safety and complete tasks in a fast paced environment