# Hamayoon Ashraf

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## Education

## **Toronto Metropolitan University**

BEng, Mechanical Engineering - Mechatronics Option

## EXPERIENCE

## Supervisor Simply BBQ

- Assisting with catering and inventory management
- Exhibiting strong communication abilities when communicating with customer
- Handling large-scale orders, such as weddings

## Manager

Shawarma Royale

- Managed inventory to ensure optimal stock levels and availability
- Resolved customer complaints and issues to improve satisfaction
- Scheduled and handled sales to drive revenue
- Managed financial records and reports to support decision making

## Projects

#### **Self-Driving Robot** | Arduino, C/C++

- Created a self-driving robot using Arduino and ultrasonic sensors to detect objects and navigate mazes
- Developed innovative algorithms for object detection and maze navigation

## Arithmetic Logic Unit - ALU | 16-bit ALU core in Intel Quartus

- Designed all the components of the device from scratch (Ex: Latches, 4-16 decoder, FSM, 7 segment etc)
- Implemented various operations such as addition, subtraction, modulation
- Tested by implementing the code on a FPGA

## Automated Door Unlocking System | Arduino, Servo Motors

- Created a door access solution for individuals with disabilities
- Used Arduino, servo motors, and fingerprint sensors to ensure secure and efficient operation

## Space Mining Robot - TorontoMet Design League | SolidWorks

- Assembled a robotic arm on SolidWorks that utilises jackhammers to drill through large rocks
- Produced detailed drawings and assembly diagrams for all parts of project as per requirements
- Devised a solution to mine rocks on Mars to support Earth's increasing demand for natural resources

#### VisionX - DeltaHacks 6 | Raspberry Pi, Python

- Led a group of 4 to create a device that assists individuals with visual impairment
- 3D designed and managed all of the wired components
- Wrote Python scripts for Raspberry Pi to control the ultrasonic sensors

#### Technical Skills

Software: MS Office, Solidworks, C/C++, Python, Arduino, AutoCAD, VHDL, Multisim, Simulink, MATLAB, Intel Quartus

Hardware: Drill Press, Soldering, Welding, Arduino, 3D Printing, Digital Circuit Design, PCB design

Toronto, ON Sep 2019 - Apr 2024

Jan 2022 – Dec 2022

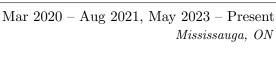
Scarborough, ON

Nov 2022 – Dec 2022

May 2022 – Aug 2022

Oct 2020 - Feb 2021

Feb 2020



Feb 2023 – Apr 2023