

## Sarim Shahwar

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### Summary of Qualifications

- **Programming Languages:** Java (OOP), C, HTML/CSS, JavaScript, VHDL, Verilog, SQL, Vue.js
- **Operating Systems:** Windows, Linux, MacOS, Android
- **Software:** Quartus (Digital Logic), Eclipse, NetBeans, JUnit, MATLAB, SOLIDWORKS, NI Multisim, Jenkins
- **Hardware:** Arduino, Raspberry Pi, Circuit Architecture Design
- **Certification:** Certified SOLIDWORKS Associate (CSWA), Spark Fundamentals, Hadoop Foundations, Big Data Foundations, Red Cross Youth Facilitator, WHMIS Certification.
- **Languages:** Fluent in English, conversational in Urdu, Hindi, and Arabic.

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### Education

*TORONTO METROPOLITAN UNIVERSITY, Toronto, Ontario*

George Vari Engineering and Computing Centre, ENG

September 2021–  
Present

- Bachelor of Engineering (B.Eng. Computer Software Engineering)

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### Projects

#### Flight Booking System

- Created a Java program which functions as a simple model of a flight booking system.
- Objects were created to represent flights, passengers (frequent flyer member or non-member), bookings, available seats, ticket prices for respected members and non-members, departure, and arrival times.
- Tested the Flight Booking System with the use of JUnit to ensure the program functions with the desired outputs.

**Skills:** Java (OOP), JUnit, Eclipse, NetBeans

#### Simple GPCPU (General-Purpose Processor)

- Designed and constructed a logic unit that functioned as a General-Purpose Processor.
- Created the following components which led to the final functional build of the processor: Arithmetic logic unit, Latch, Decoder logic, Multiplexer logic, FSM logic, Seven-Segment Display.
- Block Diagrams and waveforms were created to simulate the behavior of the designed processor.

**Skills:** VHDL, Verilog, Logic Functions

#### Announcement Application

- Created an announcement application with the use of HTML/CSS and JavaScript.
- The application was implemented with the use of local storage.
- The announcement application consists of a separate student and teacher login page. Teachers will have access to a student viewer and an announcement sender page.
- Students will have access to only a student login page, and an announcement viewer page.

**Skills:** HTML/CSS, JavaScript, Sublime Text

### **Greatlakes Data Calculator**

- Created a C language program to collect specific data from a table with regards the 6 Great Lakes.
- Given the data, the created program will then display specific information collected from the data table.
- Ex; lake with the highest temperature during a certain year, the average temperature of all the lakes in the past 5 years.

**Skills:** C, Geany

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## **Work Experience**

### **Vehicle Control System Team Member**

*Ryerson International Hyperloop – Toronto*

January 2022–  
Present

- Guidance, Navigation & Control Systems Team Member
- Assist with various tasks involving but not limited to, programming the vehicle control system, designing the hardware layout, and testing the systems already in place.
- Create codes for Arduino, Raspberry PI, and Communication devices such as XBEE modules
- Wire circuits in order for each component to run accordingly, with respect to the created program.
- Coordinate with other team members to ensure all competition requirements are met.

### **CEWIL Technology Innovation & Social Impact Fellowship**

*Play4Tomorrow – North America*

January 2022–  
May 2023

- Grand Prize winner of 150+ game submissions for "The Academy Challenge," a 48-hour game design competition.
- Working with the best international technologist and youth development experts
- Creating functional games that can impact youth socially and incorporate historically creative individuals such as tech entrepreneurs.
- Internship with possibly: Stanford University, Zero Degree Project, TVO, Roblox, TeachAids, etc.

### **OMNI CUSTOMER EXPERIENCE SALESFLOOR ASSOCIATE**

*WALMART CANADA - Brampton, ON*

April 2020–  
August 2021

- Provide customer service by offering assistance to meet the customer's shopping needs.
- Function as part of a team to strategically plan and execute duties based on workload and customer traffic patterns.
- Comply with All Food Safety standards and Cold Chain procedures, i.e., complete SureCheck.

### **ROBOTICS PROGRAMMER & BUILDER**

*VEX ROBOTICS - Brampton, ON*

September 2017–  
June 2019

- Overlooked and mentored by senior programmers on how to code using C++ in order for the robot to function.
  - Created code for the autonomous driving function and driver control.
  - Designed a 3-dimensional layout of the build, including the functionality.
  - Built the robot using precise measurements and maintained the build throughout various competitions
  - 2 Consecutive qualifications to the VEX Robotics World Championship in Louisville, Kentucky, USA.
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