Sarim **Shahwar**

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Education

Toronto Metropolitan University — Toronto, ON
Bachelor of Engineering (B.Eng., Computer Software Engineering) — Sep 2021- Present

- **Activities**: Vehicle Controls Systems Lead for Ryerson International Hyperloop, VP of Finance for TorontoMet TCF.
- **Relevant Courses**: Data Structures, Algorithms, Software Systems (Java, C language, Linux), Circuit Architecture Design, Web Development (HTML/CSS, JavaScript, React.js)

Skills </>

Language: HTML5/CSS3, Java, JavaScript, C, VHDL, Verilog, MATLAB
Framework/library: React.js, Vue.js, JUnit
Technology: Firebase, Git, Quartus (Digital Logic), SOLIDWORKS, NI Multisim, Jenkins, Eclipse, Linux, Photoshop, SQL, MS Office
Hardware: Arduino, Raspberry Pi, Circuit Architecture Design

Experience

S&IM Corp | Software Engineering Internship — Toronto, ON, May 2023- Present

- Creation of Company Websites using Wix **UI/UX**, **HTML/CSS**, **JavaScript**, **React.js**, and **Velo API**.
- Implementation and creation of booking, renting, and payment methods.

Ryerson International Hyperloop | Vehicle Controls System — Toronto, ON, Jan 2022- Present

- Guidance, Navigation & Control Systems Lead.
- Programmed the vehicle control system, designed the hardware layout, and tested the systems already in place.
- Create codes for **Arduino**, **Raspberry PI**, and Communication devices such as **XBEE modules**.
- Wired circuits for each component to run accordingly, with respect to the created program.

Vex Robotics | Robotics Programmer & Builder — Toronto, ON, Sep 2017- Jun 2020

- Programmed in **C++** for the robot to function with respect to sensors and control systems.
- Developed a code for the autonomous driving function and driver control using several sensors and gyroscopes.
- Designed a 3-dimensional layout of the build, including the functionality using Dassault Systèmes **SOLIDWORKS**.

Projects

Flight Booking System

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

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, and Seven-Segment Display.
- Block Diagrams and waveforms were created to simulate the behaviour of the designed processor.

Announcement Application

- Created an announcement application using **HTML/CSS**, **JavaScript**, and **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 can only access a student login page and an announcement viewer page.

Great Lakes Data Calculator

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