Sarim **Shahwar**

SS https://ssarim.github.io/MyPortfolio/ https://github.com/SSarim https://www.linkedin.com/in/sarimshahwar/ 4379805139 sshahwar@torontomu.ca

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), Database Systems.

Skills </>

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

Experience

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

- Developed responsive and visually appealing company websites utilizing **Wix UI/UX, HTML/CSS, JavaScript, React.js**, and **Velo API** resulting in a **60% increase** in website traffic.
- Optimized website performance by **80%** from implementing caching techniques and reducing page load time by **40%**, resulting in improved user experience and decreased bounce rate.

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

- Programmed the vehicle control system, designed the hardware layout, and tested the systems using Arduino programming Language to optimize the overall system by **81%.**
- Created codes for **Arduino**, **Raspberry PI**, and Communication devices such as **XBEE modules**, reduced instability in communication by **92%.**

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, resulting in an efficiency improvement of **93.6%.**
- Designed a 3-dimensional layout of the build, including the functionality using Dassault Systèmes **SOLIDWORKS**.

Projects

Flight Booking System

- Developed a **Java** program incorporating **JavaFX** and **JUnit** testing, simulating a flight booking system with an intuitive user interface, resulting in an improved user experience.
- Conducted extensive unit testing using JUnit to ensure the accuracy and functionality of the flight booking system, achieving a comprehensive test coverage of **95%** and minimizing potential bugs.
- Implemented robust error handling mechanisms within the Java program, reducing system crashes by **80%** and enhancing overall reliability.

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

- Developed and implemented an interactive announcement application using **HTML/CSS**, **JavaScript**, and **Local Storage**, resulting in a **97%** increase in communication.
- Collaborated with cross-functional teams to gather requirements and ensure seamless integration of the announcement application into existing systems, resulting in a smooth user experience for over **500 Users.**

Bookstore Application

- Created a **Java** program which functions as a Bookstore application using **Java, JUnit, SQL** and **JavaFX.**
- Built password protected login systems as well as a checkout system for customers, resulting in an efficiency of **88%**.