SARAH **SIDDIQUI**

· sar.siddiqui@mail.utoronto.ca · +1 647 617 6571 ·
· https://www.linkedin.com/in/sarahsiddiqui-ss · https://github.com/sarahsiddiqui ·

Education

University of Toronto — Toronto, Canada
Bachelor of Applied Science, Computer Engineering — September 2022 – Current
Minor in Artificial Intelligence

- Honors: Dean's Merit Award, William Buttimer Scholarship
- Relevant Coursework: Data Structures and Algorithms, Applied Fundamentals of Deep Learning, Software Communications and Design, Programming Fundamentals, Engineering Mathematics and Computation

Experience

Human Powered Vehicles Design — Toronto, Canada
Junior Designer — June 2023 – Current

- Supervised wet and dry carbon fiber layups for primary spars, guaranteeing the aircraft's structural integrity.
- Constructed and tested personalized circuit boards (PCBs).
- Utilized a Universal Testing Machine (UTM) for stress testing carbon fiber spars, performing compression and flexural tests to ensure optimal performance under load conditions.
- Tested, maintained, and repaired team speed bikes for competitive races, ensuring peak performance and safety.

Human Powered Vehicles Design — Toronto, Canada
Secondary Structures Lead — July 2023 – September 2023

- Planned and delegated simultaneous tasks for constructing ribs and riblets of the human-powered aircraft, ensuring efficient workflow and timely project completion.
- Instructed team members on machine operation, material handling, and assembly techniques, fostering skill development and team collaboration.
- Managed the operation and testing of the hot-wire CNC machine, ensuring precise cuts of foam for secondary ribs
- Spearheaded presentations at the Human Powered Vehicles Recruitment event, guiding and mentoring a group of 30 undergraduate students through the design process.

Loreto Rainbow Homes — Toronto, Canada
Volunteer Tutor — June 2021 – June 2022

- Tutored math, English, and physics to several children who had recently joined the shelter between the ages of 6 and 12 to ensure they were proficient for their subject level.

Notable Projects

TrailBlazer: A city mapping software with a responsive UI that includes optimized directions, a search bar for specific roads, and buttons to display map landmarks. Integrated OpenStreetMap API for real-time data and solved the Traveling Salesman Problem using multi-threading and unordered maps in C++. Utilized the GTK graphics library for visualization.

Dexterity Dash: Reflex-testing game to aid in hand-eye coordination recovery for brain trauma patients, seamlessly integrating software and hardware components including custom button controllers, FPGA, VGA, and game software.

Skin Cancer Classifier: Deep learning-based Convolutional Neural Network (CNN) to analyze and classify dermoscopic images of pigmented lesions into several types of skin cancer in Python. Libraries including Pandas, PyTorch, NumPy, and TensorFlow were used to create this model.

Enhanced Google Dino Game Remake: Created enhanced remake of classic Google dino game with added design features, combining C++ with FPGA and hardware peripherals.

Skills & Interests

Technical: Python, C, C++, MATLAB, Assembly, G-Code, LTSpice, Simulink, Verilog, Arduino, Logisim, Model Sim

Machining: Rolling Resistance Machine, Bandsaw, Drill Press, Hot Wire CNC Machine, 3D Printer

Interests: Artificial Intelligence, Game Development, Health Informatics, Field Programmable Gate Arrays (FPGAs)