RAJ **ZALA**

647-527-8623
zalaraj720@gmail.com
www.linkedin.com/in/raj-zala

SUMMARY OF QUALIFICATIONS

- Project-oriented experience in SolidWorks, ANSYS, MATLAB, HTML, CSS, Python, and JavaScript
- Hardware literacy - 3D Printing, Arduino, Machining
- Effective laboratory skills cultivated through developing gelatin-based bioplastics, practicing optical microscopy, and conducting material testing
- Showcased rapid learning ability through learning prosthetic hand design with little previous experience
- Developed project management and leadership skills through leading multiple projects with strict timelines

EXPERIENCE

Mechanical Team - Project Lead | Waterloo Airlock Design Team

SEPTEMBER 2018 – PRESENT

- Working with a team of 40 to produce a fully functional and self-sustainable airlock for a Mars colony
- Using SolidWorks to design components of the hatch connecting the airlock to the atmosphere of Mars
- Analyzed forces required for movement of the hatches through ANSYS
- Investigated materials and actuators to utilize to optimize movement of the hatch while minimizing friction

Mechanical and Software Team | Bio-Mechatronics Design Team

SEPTEMBER 2018 – PRESENT

- Modified and modelled fingertips of prosthetic hands using 3D printing and CAD
- Collaborated with team to analyze Arduino code in order to optimize and make improvements

Head of Regional Administration | BAPS Canada

JANUARY 2013 – PRESENT

- Constructed and performed various data analysis and data modelling methods to track the progress of youth activities programs throughout Canada
- Managed and collaborated with a team to execute as well as plan annual outreach events, cultural festivals across the Greater Toronto Area, and a National Convention for 2800 delegates across North America

PROJECTS

Derby Race Car | SolidWorks

- Effectively led a group of 5 to design a fully functional race car on SolidWorks
- Managed several subcomponents of the car, such as the steering mechanism, from creation to assembly

Space Jousting | Unity, C#, Arduino

- Created a fully functional recreational application using various components of C# and Unity
- Incorporated ultrasonic sensor based hands-free remote control into the game using Arduino
- Won “Best team without a mentor” at Cipher’s annual hackathon

EDUCATION

Candidate for BASc in Nanotechnology Engineering | University of Waterloo

SEPTEMBER 2018 – APRIL 2023

Relevant Courses: Materials Science and Engineering, Computational Methods, Linear Circuits