JOCELYN LIM

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SKILLS

- **Tools:** SOLIDWORKS, AutoCAD, PLC, Microstation, Ignition, Adobe Creative Cloud, GD&T, Projectwise, Git, LaTeX, Vim
- **Programming**: Java, Python, C++, JavaScript, HTML5/CSS, Microsoft Visual Basic
- **Languages:** English (Native), French (B2)

EDUCATION

University of Waterloo - **Mechatronics Engineering** Waterloo, ON 2020 - 2025

- Varsity Women's Rugby
- EngHack Marketing Director, EngSoc Novelties Director

EXPERIENCE

Hatch Ltd - Electrical/Control Automation Engineer Sudbury, ON Jan 2022 - Apr 2022

- Created user facing interactive HMI windows to control and monitor a network of mining process systems using **Ignition**
- Implemented automated and manual procedures for mining machinery through the use of ladder logic and **PLC programming**
- Used AutoCAD and Microstation to create SLDs, PIDs, layout diagrams and wiring diagrams of a large electrical network
- Actively participated in design reviews of drawings and schematics to ensure consistent safety and design standards
- Performed various electrical calculations for equipement sizing and created excel calculators based upon the OESC

WATERLOOP – Mechanical Division Waterloo, ON May 2021 - Present

- Developed designs for a lightweight and low heat braking system integrated with the guidance system on a Hyperloop pod
- Researched and developed different liquid cooling methods for thermal management of a Linear Induction Motor
- Created 3 iterations of different concept render designs of a carbon fibre shell using **SOLIDWORKS Visualize** and **Blender**

Veriday - QA Analyst Mississauga, ON May 2021 - Aug 2021

- Designed and created 7 interactive and user friendly websites for financial advisors in under 3 months using **HTML/CSS**
- Provided front end support to users of a marketing platform by quickly responding to requests through Jira and Zendesk

WATonomous - Mechanical Divison Waterloo, ON Jan 2021 - Jun 2021

- Designed a water resistant 3D printed enclosure to be mounted on vehicle using **SOLIDWORKS** with a press fitted lid
- Enabled a sensor network to capture data with minimal noise from air resistance, vibrations and external elements
- Worked on a design team to create a **level four fully autonomous vehicle** to compete in a four year SAE competition

Royal Bank of Canada - Innovation Developer Toronto, ON Jul 2019 - Aug 2019

- Brought a web application with 1.9k daily users from development to widespread production in a two month time frame
- Continuously improved the user interface and experience of a performance tracking web app using **HTML** and **CSS**
- Integrated backend servers using Java Springboot to easily and efficiently extract student data from databases

PROJECTS

Friendship Lamp Waterloo, ON Nov 2020

- Built and programmed internet-connected co-ordinated lamps with live colour updating dependant on a sister lamp
- Designed and 3D printed a light diffusing lamp shell to hold a Raspberry Pi and accommodate wires using **SOLIDWORKS**
- Designed an electrical circuit involving a variety of components to solder together and control using a Raspberry Pi

Luke Skywalker Lightsaber Sudbury, ON Jan 2022

- Prototyped and built a 3D printed Luke Skywalker lightsaber replicate using **SOLIDWORKS** powered by an Arduino
- Researched and prototyped different light sources, and different methods of lightsaber blade assembly and light diffusion

Jojo's Garage Toronto, ON May 2020

- Replaced radio controlled technology with new servos, to improve steering accuracy of remote controlled cars by **200%**
- Sourced and installed transmitters and receivers into the cars to improve controller range and accuracy by **50 %**
- Efficiently soldered 10+ connections onto a motor and power supply within a 3 hour time line to improve the speed of the car

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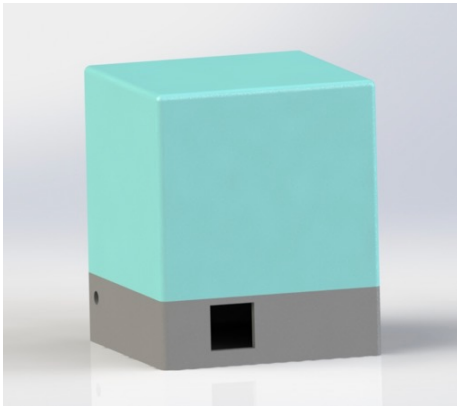
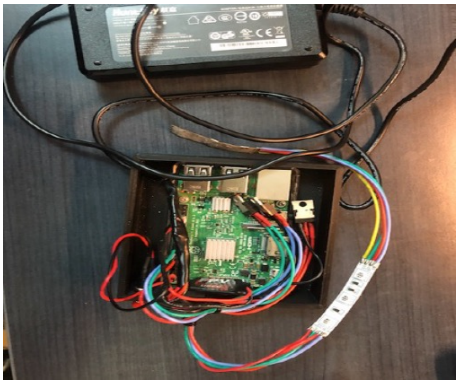




Friendship Lamp:

A project involving lamps connected to each other through the internet. The two lamps live update according to the colour of its sister lamp.

Hardware/Mechanical Features:

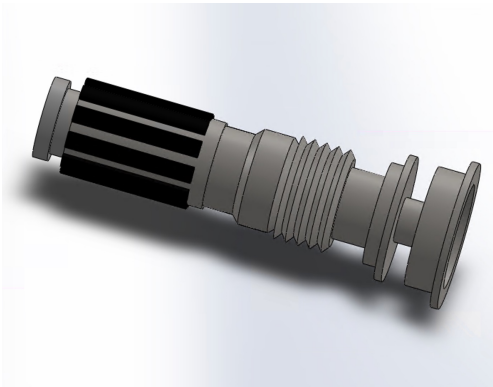
- A lamp shade was designed to be 3D printed using SOLIDWORKS. The lamp shade was modelled to house a Raspberry Pi, and allows ethernet and cables along with buttons to extrude from the shell.
- Power cables, MOFSETS, LEDs and stepdown boards were soldered together and controlled by a Raspberry Pi

Software Features:

- A Raspberry pi was programmed to change colours depending on a value in a google sheet
- The Google Sheets API was used to connect the lamps to each other

Luke Skywalker Lightsaber

A project a 3D printed lightsaber modelled after Luke Skywalker's weapon from Star Wars



Research and design:

- The handle was modelled after a combination of two lightsabers. Hand sketches were created during the design process
- Different forms of light colouring and diffusion were researched and experimented with to see what would produce the best blade

Implementation

- The lightsaber handle was designed in SOLIDWORKS to be 3D printed
- LED lights are to be controlled by a push button and an Arduino to create a colour changing blade