Yulim Lee

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Education

Graduated June 2019 — **Bachelor of Applied Sciences**, *University of Toronto*
Major in Mechanical Engineering, Minor in Robotics and Mechatronics

Mar 2016 & Nov 2018 — *George Brown College*
Machining Courses: Machining I, Machining III, Welding

Technical Skills

Modeling: Solidworks and Inventor; AutoCAD; ANSYS; PSpice; MATLab & Simulink; Simio
Programming: C, C++, Python, ROS, Git Bash
Microsoft: Word, Excel, PowerPoint
Machining: Lathe, Mill, Drill Press, Welding (Stick, Oxyacetylene), Circle Grinder

Relevant Engineering Experiences

Sept. 2017 – Aug. 2018 — **Mechanical Engineering Intern,** *Isowater Corporation*

- Collaborated with chemical and electrical interns to interpret PIDs, procure parts, and build prototype piping sub-assemblies and frames of chemical process systems.
- Using Inventor and AutoCAD, converted PIDs into 3D models and 2D drawings with enough detail that coworkers and contractors could manufacture with minimal confusion or delay.
- Acted as key point of contact with operator from partner university, troubleshooting issues with a prototype and receiving weekly updates.
- Completed documenting past projects by updating the BOMs and part drawings, finishing incomplete/missing files, and registering all changes into the company database.
- Validated the structural strength of a heavy equipment skid, shipping container supports and customized parts by creating stress calculations spreadsheets and completing FEA on ANSYS.

Nov. 2016 – Aug. 2017 — **Chassis Fabrication Team Member,** *U of T Solar Car Design Team*

- Cooperated with supervisors and fabrication members to construct the hybrid monocoque chassis.
- Fabricated custom carbon fiber and fiberglass composites, from cutting carbon fiber/fiberglass sheets, foam board and honeycomb sheets, applying the epoxy and preparing the vacuum mold.
- Interpreted rough drawings and verbal instructions to mill and lathe custom metal moulds, and laminate sheets. Consulted supervisor for more details to machine the suspension system's beams.
- Enhanced the chassis' aerodynamic properties by sanding and applying filler to smooth plugs, moulds and chassis.

Sept. 2014 – May. 2016 — **Machinist,** *U of T Formula 1 SAE Design Team*

- Machined various steel and aluminum parts using the grinder and drill press.
- Cooperated with others to assemble chassis and structural beams, with rivets and welding.

Relevant Engineering Projects

Jan. 2019 – May 2019 — **Programming Turtlebot2,** *University of Toronto (MIE443)*

- Worked on a team of four to consolidate independently written functions and states, ensuring each would trigger and transition appropriately.
- Determined that a brute force algorithm for the travelling salesman problem was the optimal solution for a path planning challenge and coded it for the Turtlebot2.
- Impressed judges on programming Turtlebot2 to recognizably emote rage with programmed movements and sounds that trigger after sensing a hit.