Rae Jeong

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2nd Year Mechatronics Engineering
University of Waterloo

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Skills Summary

C++	*ROS*	*Git*	*Arduino*
Python	*RViz/Gazebo*	*Machining*	*PLC*
MATLAB	*Ubuntu Linux*	*Solidworks*	*Raspberry Pi*

Work Experience

Robotics Research and Development Engineer :: MakeLab   *May 2015 – Aug 2015*

- Leading the research and development of a light weight robotic arm design and software implementation.
- Using ROS for the framework, motion planning of the arm and Arduino for PID control of the joints.
- Modular actuator and robotic arm design for a 4 DOF robotic arm with 1 kg payload and 1 meter reach.
- Documenting and managing on the development of the robotic arm as an Open Source project.

Systems Integration Engineer :: Wilco Machine & Mold   *Sept 2014 – Dec 2014*

- Design and implementation of an automated temperature control system using Unitronics PLC.
- Experience with variety of machining tools such as CNC mill and lathe.
- High precision part design for sealing plate and vacuum chambers using Solidworks.

Software Engineer :: Polar   *Jan 2014 – April 2014*

- Small feature implementations and bug fixes using Python mainly.
- Development of an IRC bot for a more efficient development cycle.

Projects and Activities

Open Source Modular Robotic Arm Project :: Mechatronics   *Affordable/Functional/Open Source*

- Open source project to create functional but affordable robotic platform.
- Continuation of the robotics research and development from MakeLab.
- Small team of engineering students working closely with the client and the UW robotics team.
- Completing the minimum viable product for the Robotic Arm Project and releasing to the public.
- Goal of $2500.00 for anyone to build the robotic arm from anywhere.

3D Printer Design and Build :: Mechanical   *Affordable/Customizable/Accurate*

- Fused deposition modeling 3D printer design and build. Inspired by Ultimaker design.
- 3D printer model designed in Solidworks, and manufactured through 3D printing and laser cutting.
- Documenting CAD, BOM, Software and tutorials.

Education

University of Waterloo B.A.Sc., Mechatronics Engineering – Class of 2018 – 2B Academic Term