**RICHARD HU**

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**EDUCATION**

**Bachelor of Applied Science and Engineering April 2017 Expected**

University of Toronto: Third Year Mechanical Engineering **CGPA: 3.78/4.00**

* Robotics and Mechatronics Minor, specialize in Bioengineering and Mechatronics

**Basic Machining Course March 2015**

George Brown College, Toronto, ON

**Grants and Awards**

The following awards was granted to select few based on academic excellence

* Shell Canada Limited Engineering Scholarship **July 2015**
* University of Toronto Excellence Award **June 2015**
* Dean’s Honour List **June 2014 to present**

**TECHNICAL SKILLS**

**Analysis Programs:** Arduino, ANSYS, ImageJ, MiniTab, MATLAB, PSpice, SolidWorks, C programing

**Microsoft Office:** Microsoft Word, PowerPoint, Excel, Publisher, Outlook

**WORK EXPERIENCE**

**Independent Researcher June 2015 to September 2015**

Spray and Atomization Lab, University of Toronto

* Independently defined detailed research scope and conducted an unprecedented research on droplet breakup phenomena under minimum supervision
* Developed DSLR, PC and fluid piping synchronization system using Arduino to automate experimental data collection process resulting in reduction of over 85% of data collection time
* Gathered near 4000 image data, and performed in depth qualitative and quantitative analysis of the datum using fluid mechanics theory, Minitab, ImageJ and Imagemagick
* Discovered and classified 13 never before seen droplet breakup phenomena

**Tutor August 2014 to September 2015**

New Start, Hart House, University of Toronto

* Tutored a groups of students, ranged from high school, to 2nd Year University of Toronto students in subjects such as English, Physics, Chemistry, and Calculus
* Counseled students in defining study goals and formulate personal study methods

**DESIGN EXPERIENCE**

**Team Leader September 2015 to December 2015**

Windshield Wiper Mechanism Innovation, University of Toronto

* Scheduled and facilitated team meetings, brainstorm sessions, and team collaboration sessions
* Proposed a clever and innovative design to replace the conventional tandem wiper system, resulting an increase of wiper coverage by 22% compared to conventional wiper system
* Constructed precise mathematical and CAD model and analyzed the design with Autodesk, Solidworks and MATLAB

**Team Leader September 2014 to December 2014**

CNC Milling Machine Design, University of Toronto

* Compiled detailed design report including scope, objective, parts specification, and theoretical machine capabilities
* Led the group by coordinating workflow, plan schedule, internal milestones, and fostering harmonious team dynamics

**Team Member January 2014 to May 2014**

Sunnybrook Park Pavilion Renovation, University of Toronto

* Designed a floor plan for the renovation of Cricket Canada’s head quarter in a team of 5
* Drove the team to meet deadline to ensure a rigorous design schedule was followed
* Reviewed all the report written by the team to ensure client standards are met

**EXTRA-CURRICULAR INVOLVEMENT**

**Competitor November 2015**

NExT-Schlumberger & ShawCor Petro Challenge, University of Toronto

* Using OilSim program to simulate the life cycle of oil exploration and drilling in a team of 4
* Gathered and evaluated member’s input to formulate the optimal decision
* Nurtured team dynamic in a multidisciplinary team under high pressure and time constraint
* Completed the challenge as the most profitable team in its game section

**Vice President January 2015 to May 2015**

Skule Stress Release Club, University of Toronto

* Organized events in a team of 14 for purpose of relieve stress of engineering students
* Applied club funding in front of UTSU funding committee and searched for potential sponsors

**Competition Award Winner/Team Leader January 2015**

University of Toronto Engineering Kompetition (UTEK) Junior Design

* Created a design and pitched its proposal in a team of 4 in a competition against 26 other teams
* Innovated under immense pressure, time constraint and limited resource
* Coordinated team discussion, motivated teammates, and made critical decision on design approach for the team
* Received “Best Innovation Award” and “Best Prototype Award”

**Mechanical Lead October 2014 to December 2014**

University of Toronto Robotics Association Sumo Competition

* Designed and constructed an optimal chassis for an autonomous robot using sheet metal
* Oversaw and directed the construction and assembly of the bot

**Participating Member June 2014 to August 2014**

Blue Sky Solar Racing, University of Toronto

* Resigned and researched of a part of the cockpit of blue sky solar racing car
* Investigated and formulated preventative measures to numerous potential issue during racing