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 the conventional system
- Constructed precise mathematical and CAD model, 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 cohesive 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
- 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