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| RICHARD HU 88 Harbour Street Unit 2207 Toronto, ON • richie.hu@mail.utoronto.ca • (647) 775-9055 EDUCATIONUniversity of Toronto – *Mechanical Engineering, Bachelor of Applied Science* Sept 2013 – Present  * Mechatronics & Bioengineering Stream, Robotics and Mechatronics Minor. GPA (3.81/4.00) * Shell Canada Limited Engineering Scholarship (2015) * University of Toronto Excellence Award (2015) * Dean’s Honour List (2014 – Present)  EXPERIENCEConavi Medical, Toronto — *Mechanical Design Intern*May 2016 – August 2017  * Developed strong organization and presentation skills through driving and preparing 3 major technical design reviews with senior leadership in attendance. * Proactively established an adaptable inventory system with full traceability for over 140 components. Led to improved plannability of major milestone and V&V activities and ensured reliability of regulatory submission document. * Applied skills such as jig design, statistical analysis, tolerance analysis, MATLAB and SolidWorks to conduct engineering design testing, and designed components that was critical to patient safety. * Coordinated with senior engineers to develop and optimize manufacturing processes, drafted work instructions and developed part specifications.  RELEVANT PROJECTSAutonomous Maze Navigation Rover Design — *Systems Developer*Toronto, September 2017 – December 2018  * In a team of 5, built an autonomous rover that is capable of maneuvering through a maze, performing obstacle avoidance, localization, pathfinding, pick up and deliver a payload to designated location. * Designed overall software architecture of the rover. * Implemented 2D histogram localization, obstacle detection and avoidance, and path planning algorithm using MATLAB and Arduino.  Open Architecture Quadcopter Capstone Design — *Project Manager & Mechanical Designer*Toronto, September 2017 – Present  * Bridged the communication gap between the supervisor, client and team via continuous and open communication. * Applied learnings from leadership courses to inspire and empower members to be active, creating a professional, and synergizing team environment. * Oversaw project progress and direction, used Gantt chart plan project flow, proactively engage with teammate to formulate feasible personal work plan for each team member and overall team goals. * Using SolidWorks and ANSYS and 3D printer to design, analyze, and prototype the designed mechanical components and conducted verification testing.  Pico-Scale Hydro Turbine Variable Guide Vane Actuation Design — *WERL Lab* *Researcher*Toronto, January 2018 – Present  * Designing a variable guide vane mechanism for a 4-inch diameter, self-powered turbine for a startup company that is in collaboration with University of Toronto Water and Energy Research Lab.  Autonomous Turtle Bot — *Software Developer*Toronto, January 2018 – Present  * Using opensource ROS packages to program a Turtle Bot to explore and map an unknown map.    EXTRACURRICULARS **Mechanical & Industrial Engineering Mentorship Program –** *Mentor* University of Toronto, September 2017 – Present  * Advised junior engineering students on how to establish study goals, obtain research opportunities, how to participate in skill building extracurriculars.   **New Start –** *Tutor* Toronto, August 2014 – September 2015  * Instructed a group of students ranging from high school, to 2nd year U of T students on English, Physics, Chemistry and Calculus. * Counseled students in defining study goals and formulate personal study methods.   **U of T Engineering Competition (UTEK) Junior Design –** *Award Winner* Toronto, January 2015  * 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, motivate teammates, and made critical decision on design approach for the team. * Received “Best Innovation Award” and “Best Prototype Award”.  SKILLS & INTEREST **Technical Skills:** SolidWorks, Arduino, MATLAB & Simulink, ROS, Machining, Microsoft Excel  **Soft Skills:** Teamwork, Project management, Big picture thinking, Strong work ethics, Multitasking.  **Language:** Fluent in English and Mandarin.  **Interest:** Gadgets, Board Games, Films, Anime, Food, Cooking |

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