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| RICHARD HU 88 Harbour Street Unit 2207 Toronto, ON • richie.hu@mail.utoronto.ca • (647) 775-9055  Objective Statement EDUCATIONUniversity of Toronto – *Mechanical Engineering, Bachelor of Applied Science* Expected graduation April, 2018  * 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)  WORK EXPERIENCEConavi Medical, Toronto — *Mechanical Design Intern (16 months)*May 2016 – August 2017  * Prepared and lead 3 major technical design reviews with senior leadership. [Outcome?] * Established an adaptable inventory system with full traceability for over 140 medical components. This lead to improved plannability of major milestone and V&V activities and ensured reliability of regulatory submission document. * Successfully conducted engineering design testing, and designed components critical to patient safety using jig design, statistical analysis, tolerance analysis, MATLAB and SolidWorks. * Coordinated with senior engineers to develop and optimize manufacturing processes, drafted work instructions and developed part specifications. [Outcome?]  RELEVANT PROJECTSAutonomous Maze Navigation Rover Design — *Systems Developer*September 2017 – December 2018  * Developed software architecture for autonomous rover capable of maneuvering through a maze, performing obstacle avoidance, localization, pathfinding, pick up and deliver a payload to designated location. * 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*September 2017 – Present  * Provided single-point-of-contact and coordination between customer, supervisor, and the design team. * Used Gantt chart to plan project schedule and critical path, proactively engage with team members to manage performance against plan. * Used SolidWorks and ANSYS and 3D printer to design, analyze, and prototype mechanical components and to conduct verification testing. * Inspired and empowered team members by creating a professional, and synergistic team environment.  Pico-Scale Hydro Turbine Variable Guide Vane Actuation Design — *WERL Lab* *Researcher*January 2018 – Present  * Designed a variable guide vane mechanism for a 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  * Used open source 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 innovative design (of what?) under short time constraint and limited resources * Pitched design proposal in competition against 26 other teams. * 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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