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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)  SKILLS  |  |  |  | | --- | --- | --- | | *Soft Skills*   * Teamwork * Project Management * Big Picture Thinking * Strong Work Ethics | *Technical*  * Experienced in using SolidWorks through various design projects and work experience. * Can proficiently program in Arduino through programming an Arduino controlled autonomous rover. * Continuing ROS learning through autonomous Turtle Bot programming. * Experienced in using MATLAB & Simulink through control systems design course, autonomous rover localization programming. * Experienced in Electro-Mechanical Systems Design through various 4th year projects. * Basic knowledge of Machining through completion of George Brown Machining course. * Multitasking | LANGUAGES  * English – Fluent * Mandarin - Fluent |  EXPERIENCEConavi Medical, Toronto — *Mechanical Design Intern*May 2016 – August 2017  * Developed strong organization and presentation skills through leading and prepared 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 conducted engineering design testing. Coordinated with senior engineers to develop manufacturing processes, drafted work instructions and developed part specifications.  NOTABLE PROJECTSAutonomous Maze Navigation Rover Design — *Software & Electrical Systems Developer*September 2017 – December 2018  * In a team of 5, designed and prototyped an autonomous rover to maneuver through a maze, performance obstacle avoidance, localization, pick up and deliver a payload. * Designed overall software architecture of autonomous rover. * Implemented 2D histogram localization, obstacle detection and avoidance, and path planning algorithm in using MATLAB and Arduino.  Open Architecture Quadcopter Capstone Design — *Project Manager & Mechanical Designer*September 2017 – Present  * Used Gantt chart to organized workflow, proactively communicated with teammate to formulate feasible work plan. * Applied previous learning from leadership courses to inspire and motivate members under stressful situations, creating a professional, and harmonious team environment. * Using SolidWorks and ANSYS and 3D printer to design, analyze, and prototype the designed mechanical components to conduct verification testing.  Pico-Scale Hydro Turbine Variable Guide Vane Actuation Design – *Researcher*January 2018 – Present  * Designing a variable guide vane mechanism for a 4-inch diameter, self-powered turbine for a start up company that is in collaboration with University of Toronto Water and Energy Research Lab.  Autonomous Turtle Bot – *Software Developer*January 2018 – Present  * Using opensource ROS packages to program a TurtleBot2 to explore and map an unknown map.  EXTRACURRICULARS **MIE Mentorship Program**   * Provided mentorship to younger MIE students. * Provided advice on course selection, career direction, research opportunity.   **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  SKILLSINTEREST Gadgets, Board Games, Films, Anime, Food, Cooking |