

BRAYDEN DANIEL HOLLIS

Troy, NY 12180

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WORK EXPERIENCE

- Intern – Automated Grasp Planning** May 2015 – August 2015
Harris Corporation Palm Bay, Florida
- Researched and implemented novel grasp planning method of unmodeled objects using C++
- Research Assistant** August 2013 – May 2015
Rensselaer Polytechnic Institute Troy, New York
- Researched automated grasp planning of unmodeled objects using Matlab
 - Maintained and improved grasp planner of modeled objects in RPI GraspIt! using C++
- Research Associate – NASA Robotics Academy** June 2014 – August 2014
NASA Marshall Space Flight Center Huntsville, Alabama
- Lead team working on improving one man spacecraft with teleoperation capabilities
 - Designed and implemented software framework for craft in ROS C++
- Intern – Autonomous Quadrotor Safety System** June 2013 – August 2013
NASA Jet Propulsion Laboratory Pasadena, California
- Implemented an onboard system monitor to analyze system health and initiate emergency safety maneuvers in ROS C++
 - Implemented a base station monitor system of quadrotor internal states in C++ FLTK
- Intern – Simulation Development** June 2012 – August 2012
NASA Goddard Space Flight Center Greenbelt, Maryland
- Created proximity operation window in OpenGL
 - Programmed spacecraft docking functionality in C
 - Researched asteroid gravity modeling methods
- Intern – Quality Process Improvement Effort** June 2011 – August 2011
NASA Jet Propulsion Laboratory Pasadena, California
- Created source inspection database in MySQL
 - Created web interface for the database using HTML, ColdFusion, jQuery, JavaScript, and AJAX
- Tutor – Physics** September 2012 – May 2013
Whitworth University Spokane, Washington
- Assisted Physics I and Physics II students with homework and understanding the physics principles
- Event Technician** September 2009 – May 2013
Whitworth University Spokane, Washington
- Sound technician for campus events
- Grader – Physics** September 2011 – May 2012
Whitworth University Spokane, Washington
- Graded homework for Physics I and Physics II

COMPUTER EXPERIENCE

- C/C++
- C#
- ROS
- Linux
- Matlab
- Git
- OpenGL
- Java
- SQL
- Inventor
- HTML
- ColdFusion
- JavaScript
- jQuery
- AJAX
- Microsoft Office (Word, Excel, PowerPoint, Publisher)

EDUCATION

Rensselaer Polytechnic Institute

August 2013 – Present

Troy, New York

- Ph.D. in Computer Science
- Research: Robotics, Tactile Skins, Compressed Sensing, Machine Learning, Grasping
- Cumulative GPA: 4.0/4.0

Whitworth University

September 2009 – May 2013

Spokane, Washington

- B.S. in Computer Science
- B.A. in Physics
- B.A. in Mathematics
- Laureate Society Member (Whitworth's Honor Program)
- Cumulative GPA: 3.96/4.0

Sample Return Robot Challenge

December 2013 – June 2015

- Led team of 10 to design, build, and program a robot for 2014 Sample Return Robot Centennial Challenge (SRRCC)
- Aiding team leader lead a team of over 20 students for 2015 SRRCC
- Software team mentor for 2016 SRRCC
- Assisting software research and development for robot

Search and Rescue Robot Project

September 2012 – May 2013

- Worked in a team of 5 to develop a robot for simulated search and rescue operations
- Assembled the Arduino onboard control code and the base station control code

Senior Design Project

March 2013 – May 2013

- Worked in a team of 4 to design and develop a mobile app game for a community member
- Designed, programmed, and tested computer chess player

PUBLICATIONS

- B. Hollis, S. Patterson, and J. Trinkle, "Compressed Sensing for Tactile Skins," Submitted

AWARDS & CERTIFICATES

- Science, Mathematics, and Research for Transformation (SMART) Education for Defense Scholarship (2015)
- Outstanding Computer Science Major Award (2013)
- NASA Motivating Undergraduates in Science and Technology Scholar (2010-13)
- Whitworth University Barry M. Goldwater Scholarship Candidate (2011)
- Whitworth University Physics Departmental Scholarship (Junior & Senior year) (2011 & 2012)
- Whitworth University Mathematics/Computer Science Senior Departmental Scholarship (2012)
- Whitworth University Mathematics/Computer Science Junior Talent Award (2011)

- Whitworth University Mathematics/Computer Science Sophomore Departmental Scholarship (2010)
- Whitworth University Mathematics/Computer Science Freshman Talent Award (2009)
- Whitworth University Presidential Scholarship (2009)

EXTRACURRICULAR ACTIVITIES

Harris Robotics Book Club

June 2015 – August 2015
Harris Corporation

Whitworth Running Club

President (2010 – 2013)

September 2009 – May 2013
Whitworth University

Concert Band

French horn player

September 2009 – April 2013
Whitworth University

First Tech Challenge Robotics Team

Co-Leader, Mechanic, and Programmer

December 2008 – April 2009
Hillsboro High School