Logan E. Beaver

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| **ObjectivE** | |
|  | To obtain a full time position as a graduate research assistant at a top tier institution with the intent of obtaining a Ph.D. in robotics. A position that utilizes my current robotics and computer science background and allows me to advance the state of the art in robotics by making novel contributions to the field. |
| **Education** | |
|  | May 2015 **Milwaukee School of Engineering,** B.S., Mechanical Engineering: GPA: 3.304 Milwaukee, WI |
| **Research experience** | |
|  | **Joy Global Inc., Surface Mining**, Robotics Research Co-Op May 2014-Present   * Implemented SLAM using LIDAR data as part of a proof of concept object detection algorithm * Designed and implemented an automated calibration procedure for a mining shovel collision avoidance system * Developed an optimized particle filter algorithm for use in multiple products currently under development   **Milwaukee School of Engineering**,Capstone Research Project 2014-Present   * Leading a four person senior design team in the development of a pneumatically driven walking robot * Derived the forward and inverse kinematics of the robot for design verification and analysis |
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| **Project Experience** | |
|  | **Milwaukee School of Engineering Game Development Crew**, President 2014-Present   * Partnered with Time Warner Cable and Discovery World to lead the first ever *Science of Videogames* exhibit for STEMfest and the Connect a Million Minds initiative * Created a custom OpenGL graphical pipeline for use in current 3D Java applications * Utilized behavior trees to develop a dynamic artificial intelligence baseline for all projects   **Ludum Dare**, Online Game Jam 2013   * Led a four person team to construct a complete game within a 72 hour timespan * Rapidly prototyped and iterated game architecture and mechanics from scratch   **Milwaukee School of Engineering**,Notable Class Projects 2012-2013   * Modeled the flight path of the first three stages of a Saturn V rocket through earth’s atmosphere * Developed and analyzed a stochastic model of a wholesale club checkout line to improve its efficiency * Integrated stepper motors with user input to control the position of a solar cell in 2D space * Developed a state machine architecture to allow a robot arm to track the position of a solar cell |
| **awards** | |
|  | * **Who’s Who Among Students in American Universities and Colleges**,Nominee2015 * **Milwaukee School of Engineering Dean’s List** 2011-2014 * Awarded quarterly to Milwaukee School of Engineering students for outstanding academic achievement |
| **Programming Skills** | |
|  | * Expert at using Java and MATLAB for large projects * Proficient with LabVIEW from multiple projects at Joy Global, Inc. * Experienced with complex data structures such as Lists, Trees, Maps, Queues, Stacks, and Threads * Some experience with C#/Python scripting through the Unity game engine and miscellaneous projects * Minor experience with header files, pointers, and memory management in C/C++ |