LOGAN E. BEAVER

1513 N. Jefferson St. Lower Unit, Milwaukee, WI 53202
Phone: 715-417-1001, E-Mail: beaverl@msoe.edu

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

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**, Nominee 2015
- **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++