JUSTIN WASSERMAN

603 E Clark St Apt 37 ⋄ Champaign, IL 61820
(847) · 708 · 2771 ⋄ jbwasse2@illinois.edu

EDUCATION

University of Illinois at Urbana-Champaign August 2019 - Present
PhD in Electrical and Computer Engineering *Urbana-Champaign, IL*

· Advisor: Girish Chowdhary

University of Illinois at Urbana-Champaign August 2014 - May 2019
B.S in Computer Engineering *Urbana-Champaign, IL*

· Thesis: Controlling, Modeling, and Scaling Underactuated, Non-Deterministic Robot Structures (Advised by Steven LaValle)
· Cumulative GPA: 3.61/ 4.00

PUBLICATIONS

A. Nilles, J. Wasserman, A. Born, C. Horn, J. Born, S. LaValle "A Hardware and Software Testbed for Underactuated Self-Assembling Robots" in IEEE International Symposium on Multi-Robot and Multi-Agent Systems (MRS), 2019

RESEARCH EXPERIENCE

FRESH (Professor Girish Chowdhary) August 2019 - Present
Research Assistant *Urbana, IL*

· Created biologically inspired neural network for action recognition. By incorporating this model into a previously trained model, accuracy was improved.

VRMSL (Professor Steven LaValle) January 2017 - August 2019
Undergraduate Researcher *Urbana, IL*

· Created simulator in Gazebo to collect data on the interaction of simple, non deterministic, self-assembling, "bouncing" robots.
· Maintainer and creator of "kronprod" library, an open source library available on Anaconda.
· Implemented data analysis of captured robotics data using Python, and CUDA.

DASLAB (Professor Girish Chowdhary) May 2018 - August 2019
Undergraduate Researcher *Urbana, IL*

· Created CNN trained on robot's camera data to assist in autonomous navigation.
· Implemented framework to enable nightly end to end testing on the TerraSentia robot. This involves interactions between the software on the robot, Gazebo, our code repositories, and a tablet.

AWARDS AND HONORS

Leung Student Venture Fund Award 2019
UIUC ECE Department

· Awarded $1000 to support research in self-assembling robotics for senior thesis.

James Scholar September 2015 - August 2017
UIUC

TECHNICAL STRENGTHS

Computer Languages	Python, Shell Scripting, C++, C, MatLab
Computing	Linux, Vim, Pytorch, ROS, Gazebo, Git, LaTeX

INDUSTRY EXPERIENCE

EarthSense May 2019 - August 2019
Deep Learning Intern *Champaign, IL*

- Created pipeline to allow for streamlined training and testing of deep learning models.
- Applied deep learning techniques to agriculture data.

Arity January 2018 - May 2018
Software Engineering Intern *Chicago, IL*

- Translated high level motion data from a car to movement on a testbed robot to create a platform to demonstrate the captured motion data.
- Created device that simulates car trips through the OBD port. Also created web interface to allow developers to interact with the device. Resulted in developers being able to test firmware on thousands of different real and simulated car trips.

Yaskawa America Inc. May 2016 - January 2017
Applications Engineering Co-Op *Waukegan, IL*

- Built software library for motion applications for gantries, Cartesian robots, robotic arms, and other robotics applications.
- Programmed and presented interface and gantry that was used as a demonstration at the International Manufacturing Trade Show.
- Created test cases and documentation for motion and math code, and different applications that Yaskawa supports.

Cornelius May 2017 - August 2017
Computer Engineering Intern *Glendale Heights, IL*

- Created Python code to communicate with customer device using a Raspberry Pi. Raspberry Pi then communicates with server to allow users to read data about their device from website.
- Implemented hardware and software for new valve technology by controlling electronics through a feedback loop. Resulted in a more tamper proof machine that can allow for more soft drink options due to size of valve.

Maclean-Fogg Engineered Plastics May 2015 - August 2015
Engineering Intern *Menomonee Falls, WI*

- Authored lean production standard manual. Documentations has resulted in $180,000.00 savings in inventory adjustments.
- Created and implemented shop floor instruction protocols for work standards yielding $1,500.00 annual labor cost reduction.

TEACHING ASSISTANCE EXPERIENCE

ENG 298 LRM Fall 2015, Fall 2017
Teaching Assistant *Urbana-Champaign, IL*

- Taught collegiate students how to mentor middle school aged students in Lego robotics and First Tech Competition.
- Communicated with local teams, coaches, and students to organize mentorships.