William C. Baskin IV ("Buck")

https://github.com/buckbaskin

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Education:

Case Western Reserve University, Cleveland, OH — GPA: 3.87

Master of Science, Mechanical Engineering — Class of 2018

Thesis: Biologically Inspired Neural Networks for Control of Legged Robots

- Machine Learning
- Algorithmic Robotics
- Robotics I

Bachelor of Science**,** Computer Science — Class of 2017

- Mobile Robotics
- Intro to AI
- Advanced Algorithms

Employment:

Software Team Lead – Biorobotics Lab Autonomous Snowplow — Fall 2014, 2015, 2016, 2017

- Won 2017 ION Autonomous Snowplow Competition with 25% better snow clearance than 2nd place
- Developed computer vision pipeline in ROS with OpenCV for successful detection of moving obstacle
- Implemented adaptive gradient descent planning for global and local path optimization
- Led reconstruction of navigation systems using Python for prototyping, C++ for critical path nodes

Software Engineer – Markers Investor Relations (Markers IR) — Fall 2016 - Spring 2017

- Built searchable database of unstructured visual data with MongoDB via scraping and text processing
- Designed API for a Node.js microservice to enhance discovery and accessibility of historic data
- Integrated customer, business and technical feedback to quickly launch successful features

Software Engineering Intern – Google — Summer 2016

- Developed Java server infrastructure for Google Maps mobile and web products
- Improved a code generation tool built with JavaPoet and Dagger to increase development velocity and reduce bugs by topologically sorting generation targets

Software Development Intern – Flashstarts Startup Accelerator — Summer 2015

- Led technical development for a Node.js and AngularJS intellectual property exchange
- Built prototype Ruby on Rails application to match companies seeking domain specific experts
- Created real-time messaging system with Socket.io to enhance interpersonal communication

Intern – Silicon Turnkey Express — Summer 2014

- Tested and debugged custom designed RapidIO interconnect board for use in a communications system
- Designed and built test fixture for single boards that cut costs by 90% compared to commercial options

Current Projects:

Hustlebug – 3D Printed Re-programmable Walking Robot — Fall 2017 – Spring 2018

- Building an innovative walking leg design optimized for manufacturability and ease of assembly
- Implementing onboard interpreter and sensor platform for easy programming in Python

Parakeet-SLAM – Visual SLAM for a 360 degree camera — github.com/buckbaskin/parakeet_slam

- Implements a modified version of FastSLAM particle and Kalman filter localization and mapping
- Vision system tracks colored features for use in an urban GPS denied environment

Relevant Skills:

Languages

Python, Java, Javascript, Node.js, C++ with ROS

Frameworks and Technologies

Git, Robot Operating System (ROS), Docker, Amazon Web Services (AWS), Flask, Django, Dagger