

Riley Van Wie Chapman

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Education

Olin College of Engineering - Needham, MA

Candidate for Bachelor of Science in Engineering: Robotics
GPA 3.73 Graduating: May 2017

Ticonderoga High School - Ticonderoga, NY

Advanced Regents Diploma with Honors
Valedictorian Graduated: June 2013

Experience

Draper Laboratory - Autonomous Vehicle Engineering Internship - Cambridge, MA **Summer 2016**

Contributed to development of autonomous city driving for tier one supplier of automotive safety equipment

- Assessed the functionality of 77Ghz automotive radar and developed tool for visualizing tracked objects from multiple sensors over an LCM network, improved test system reliability
- Designed and manufactured steering actuation mechanism for front steering robotic platform
- Developed algorithm for producing and interpreting packets for efficient communication on serial network

Olin Electric Motorsports (Formula SAE Electric team)

Fall 2013 - Present

Senior electrical engineer, chief electrical system architect

- Researched and determined optimal motor, controller, and cells for 80kW powertrain
- Structured the low voltage power distribution and CAN communication, documented system connections
- Designed configuration of 6kWh lithium battery pack, optimized weight given required power and capacity
- Designed custom PCBs with galvanic isolation between high and low voltage sections
- Oversaw division of electrical system into projects, advised electrical lead in team dynamics
- Designed, manufactured, and tested 10kW brushed DC motor controller

Robotics Research - Olin Intelligent Vehicles Lab

Spring 2014 - Present

- Developed ROS/Mavlink communication on autonomous marine mammal research drone system
- Designed mechanism for whale tag deployment by drone, reducing whale stress
- Coauthored paper and attended OCEANS '15 conference in Genova, Italy
- Developed human interaction and facial tracking using OpenCV for 3 ft. tall 3D printed Humanoid Robot

Loci Controls - Engineering Intern - Greentown Labs, Somerville, MA

Summer 2015

- Developed automation algorithms to calibrate air flow and gas concentration sensors
- Designed and built quality assurance rig to test pressure tolerances on products

Catz Sports - Web Development Intern - Needham, MA

Summer 2014

- Designed and developed backbone JS web application and for athletic training
- Developed algorithm to estimate developmental age and produce custom workouts for young athletes

Skills: Python, C, ROS, Altium, JS, HTML, CSS, MATLAB, SolidWorks, Laser Cutting, 3D Printing, Mill, Lathe, Sheet Metal, Drone Piloting, Wiring, Wrenching, Soldering

Interests: Backpacking, Biking, Music performance (Bass, Guitar, Drums), Mountain Climbing, Unicycling, Fire Arts, Rock Climbing, Tele Skiing, Ultimate Frisbee, Videography