DREW WARREN

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EDUCATION

Northwestern University
MS in Robotics
4.0 GPA
Sept. 2017 - Sept. 2018

Brigham Young University
BS in Mechanical Engineering
Italian minor
3.65 GPA
Jan. 2013 - Apr. 2017

SKILLS

Programs: MATLAB , Simulink, Python, C++, ROS, Solidworks, AutoCAD, and Autodesk Inventor

Design and soldering of printable circuit boards

Fluent in Italian

Team Player, interpersonal and communication skills, problem solver, self-starter

ADDITIONAL EXPERIENCE

President of BYU Mechatronics Club

Personal mechatronics projects:
-garage door opener
-USB camera tracker

Instructor of Italian 101 at BYU

Volunteer for 2-year church mission in Milan, Italy

Eagle Scout

WORK EXPERIENCE

Mechanical Engineering Intern at SpotterRF *Jan. 2016 - June 2017*
- Assess and design mechanical and electrical hardware solutions
- Test and measure data from radar surveillance modules
- Prototype systems of IP-based devices

Special Needs for Speed: Power Wheels Upgrade *June 2016 - Sept. 2016*
- Collaborated with charity group Special Needs for Speed
- Redesigned a children's Power Wheels car using microcontrollers, motors, and batteries to customize it for child with severe dwarfism

Research Assistant in BYU Turbomachinery Lab *June 2015 - Jan. 2016*
- Pre and post processing for computational fluid dynamics of jet engines
- Contributed to the research of PhD students and Dr. Stephen Gorrell

ACADEMIC EXPERIENCE

BYU Mars Rover Team: Embedded Systems Subteam
- Programmed embedded computers and microcontrollers
- Designed and fabricate PCBs for rover peripherals
- Created a communication network across electrical components

Baxter Butler: Robot Operating System Project
- Built an interprocess communication system using ROS
- Solved constrained path planning using MoveIt!
- Gathered 3D vision with a PrimeSense Xtion camera

Mobile Robot Arm Project
- Calculated joint and wheel angles to move in a desired path
- Designed a feedforward and PI controller
- Analyzed effect of dynamics on motion

Design of Control Systems Course
- Converted physical systems and equations of motion into transfer function models
- Designed controllers using PID, state space, and frequency domain techniques
- Progammed simulations of control systems using MATLAB, Simulink, some Python

Ping Pong Ball Shooter Robot: Mechatronics
- Designed and fabricated printed circuit boards and built mechanical parts
- Programmed a PIC24 microcontroller that managed the robot subsystems

Lego Mindstorms: Volunteer
- Taught elementary-age children basic code for programming lego robots
- Coached and guided them in construction of robots and problem solving