DREW WARREN

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TECHNICAL SKILLS

Programming: MATLAB , Simulink, Python, C++, ROS

Design and soldering of printable circuit boards

CAD: Solidworks, AutoCAD, and Autodesk Inventor

Fluent in Italian

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

ADDITIONAL EXPERIENCE

President of BYU Mechatronics Club

Personal mechatronics project: garage door opener

Used systems modeling to design small capacitor car

Instructor of Italian 101 at BYU

Volunteer for 2-year LDS church mission in Milan, Italy

EDUCATION

Brigham Young University *Jan. 2013 - Apr. 2017*

- Senior in mechanical engineering program
- Italian minor
- 3.65 GPA

EXPERIENCE

BYU Mars Rover Team: Embedded Systems Subteam *present - Summer 2017*

- Program embedded computers and microcontrollers
- Develop ROS code for controlling rover peripherals
- Create a communication network across electrical components

Advanced Robotics Course *Fall 2016*

- Studied forward and inverse kinematics methods
- Utilized and practiced the Jacobian in robotic analysis and design
- Planned motion, trajectory, and paths of robotic arms

Design of Control Systems Course *Fall 2016*

- 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

Mechanical Engineering Intern at SpotterRF *Jan. 2016 - present*

- 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 *Summer 2016*

- Collaborated on a team of 5 with charity group Special Needs for Speed
- Redesigned a children's Power Wheels car using microcontrollers, motors, and batteries to customize it for a physically handicapped 11-year-old girl with severe dwarfism
- 80+ hours of volunteer work over summer of 2016

Kinematics of Mechanisms Course *Winter 2016*

- Synthesized mechanisms for specific tasks - path and motion generation
- Analyzed position, velocity, acceleration, and dynamics of four-bar linkages

Ping Pong Ball Shooter Robot: Mechatronics *Fall 2015*

- Designed and fabricated printed circuit boards
- Programmed a PIC24 microcontroller that managed the robot subsystems

Lego Mindstorms: Volunteer *Winter 2015*

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

Research Assistant in BYU Turbomachinery Lab *Jun. 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