Addison Howenstine

visit my website for links to projects:
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Education

Duke University *2014 - 2018*

B.S. Eng., Majoring in Electrical & Computer Engineering and Computer Science

Organizations

- American Institute of Aeronautics & Astronautics (AIAA) - *VP of student chapter*
- Outing Club
- Duke Climbing Team - *Captain*
- Project WILD - *Director*

Skills

- Java, C
- Verilog, FPGA, assembly
- MATLAB
- Ruby on Rails, React, JavaScript
- HTML, CSS
- software design, data structures
- Adobe Photoshop, InDesign, Illustrator, & Creative Cloud
- 3D modelling, 3D printing
- leadership
- Wilderness First Responder

Leadership & Volunteering

Resident Assistant

- Plan community building events for dorm section of 32 students.
- Participate in regular on-call shifts for dorm of 450 residents.

Project WILD

- Teach leadership & teamwork through outdoor skills including wilderness navigation, cooking, & rock climbing on multiday backpacking expeditions.

DukeEngage: Thailand / GVI

- Volunteered with team of 12 Duke students working on environmental conservation and sea turtle rehabilitation in Thailand.
- Learned HTML/CSS during free time designing a blog to keep family and friends updated.

Duke undergraduate double majoring in Electrical & Computer Engineering and Computer Science. Hoping to someday apply my technical education in engineering and computer science to further understand and explore the world around us contributing to our next giant leap for mankind. Passionate about space, education, the outdoors, and people.

Work Experience

Amazon - *Software Development Engineering Intern*

May 2017 - August 2017

- Designed and implemented full-stack features for a brand new internal web-tool similar to Trello used by over 25,000 Amazon employees for productivity and task-management using primarily Rails and React.
- Strong emphasis on rapid production-ready code and customer experience.
- Participated in daily SCRUM meetings and regular code reviews.

NASA Stennis Space Center - *Electrical Engineering Intern*

May 2016 - August 2016

- Developed expert systems software platform for autonomous monitoring and control of rocket test systems at NASA Stennis Space Center's High Pressure Gas Facility and Kennedy Space Center's launch systems.
- Used ladder logic and physical/electrical schematics to develop a more intelligent object oriented control system to monitor sensor networks and reason with sensor data, anomaly detection, and root cause error analysis.
- Helped transition our department to modern software practices using git and version control.

Duke Innovation Co-Lab - *Student Employee*

August 2016 - present

- Teach students and faculty at Duke how to use our 3D printers, laser cutters, and CNC machines for lab research, rapid prototyping, and personal projects.

Project & Research Experience

FPGA Dance Dance Revolution

- Designed a fully pipelined processor with only structural Verilog. Used this processor to implement a dual-core 2-player Dance Dance Revolution game on an FPGA board.
- Wrote MIPS assembly code to control game play. Outlined an API for my two partners to integrate VGA display and hardware for a game controller as separate Verilog modules.

VOOGASalad Game Authoring program

- Designed program that allows users to author, design, and play a computer game from scratch. With our program, users can design games such as Super Mario, Flappy Bird, Doodle Jump, and other 2D scroller / adventure games in 30 minutes or less.
- Worked with a team of 10 students over the span of 1 month to build this program in Java. My role on the team entailed working on the front- and back-end of the authoring environment as well as managing team integration of code and XML game file saving.

Laboratory Research Assistant: Zavlanos Lab

January 2016 - present

- Work in lab focused on use of sensor networks and SLAM algorithms on a quadcopter drone for environmental mapping and autonomous movement and decision making using a ROS software platform.