

# Samantha Andow

cs.hmc.edu/~sadow

## Education

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**Harvey Mudd College** Major GPA: 3.3 May 2018

Dean's List: Spring 2015, Fall 2015, Spring 2016

**Relevant Coursework:** Data Structures and Program Development | Discrete Mathematics | Computer Systems | Computability and Logic | Linear Algebra | Multivariable Calculus

**In Progress:** Computer Security | Domain Specific Languages | Algorithms | Programming Languages

## Skills

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C++ | Java | Python | C | Scala | Haskell | L<sup>A</sup>T<sub>E</sub>X | SVN | Git

## Project Experience

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**From MyCS to our CS**, MyCS Summer Research May-Aug 2016

Synthesized data from 5,000 students surveys to write a paper on computer science education

Recommended improvements to the curriculum in the paper based on a district wide pilot program

Submitted paper to *Special Interest Group in Computer Science Education* Conference

**MyCS Website**, MyCS Summer Research May-Aug 2016

Led 5 students to create a website to host our middle school computer science curriculum, called MyCS

Oversaw migration of the curriculum from the old, difficult to use website to the new, simple website

Developed website to be more user friendly based on feedback from professional developments

**ChunkyString**, Harvey Mudd College Apr 2015

Constructed a doubly linked list of lists in C++ to have the functionality of a string object

Ensured our implementation had constant insert and deletion time, while maintaining space usage

**Autonomous Nerf Turret**, Harvey Mudd College Hardware Hackathon Oct 2014

Collaborated with 3 others over 15 hours to remodel a Nerf gun into an autonomous turret

Learned Raspberry Pi control flow and IO functionality to interact with Nerf gun

Programmed Nerf gun with a Raspberry Pi to turn and shoot continuously within the a turning radius

## Work Experience

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**MyCS Research Assistant**, Harvey Mudd College May-Aug 2016

Led 5 other students to improve an existing middle school computer science curriculum, called MyCS

Ran 3 professional developments for 30 teachers, who teach 4,000 students in the 2016-2017 school year

Analyzed 5,000 student surveys from the 2015-2016 year to study the effects of the curriculum

Adjusted curriculum based on teacher feedback and student data to facilitate education of all students

**Grader and Tutor**, Harvey Mudd College Computer Science Jan 2015-Present

Tutor and grade for Data Structures/Program Development and Principles of Computer Science

**Tutor**, Harvey Mudd College Homework Hotline Sep 2014-Present

Tutor students over the phone in math and science

## Leadership Experience

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**South Dorm President**, Harvey Mudd College May 2015-Present

Communicate with faculty and staff to create a happy, healthy living and working environment

Pass legislature in Harvey Mudd College Student Senate that shapes student life

**South Dorm Social Representative**, Harvey Mudd College May 2014-May 2015

Allocated a budget to parties and collaborated with administration to ensure a safe, fun social culture

## Service Experience

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**Science Bus Teacher**, Harvey Mudd College Aug 2014-Jan 2015

Demonstrated science experiments in elementary schools to encourage interest in STEM subjects

**Volunteer Trainer**, Halleck Creek Ranch Jun 2010-Aug 2014

Helped children with disabilities go on horseback trail rides while ensuring a safe, social experience

Trained new volunteers in horse management and rider interactions