

ANDY ZHANG

340 E. Foothill Blvd | Claremont, CA 91711 | axzhang@hmc.edu | 909.235.8612
www.github.com/zhangxingshuo | zhangxingshuo.github.io

EDUCATION

Harvey Mudd College, Claremont, CA

May 2019

- Bachelor of Science, Computer Science and Mathematics
- Major GPA (4.00), GPA (4.00), Dean's List Spring 2016

Relevant Coursework

In Progress: Data Structures and Development, Programming Practicum, Multivariable Calculus

Completed: Principles and Practices of Computer Science, Probability and Statistics, Calculus, Linear Algebra, Differential Equations, Discrete Mathematics

Computer Skills

Programming: Python, C++, Java, Julia, Racket

Software: UNIX, Word, Excel, Igor Pro, MATLAB, R (in progress)

RELEVANT EXPERIENCE

Tutor and Grader, Harvey Mudd Department of Computer Science

1/2016 - Present

- Helped students with complexity theory, recursion, and finite automata
- Graded intro assignments in Python, Java, Assembly, and Racket

Researcher, NSF Research Experience for Undergraduates

5/2016 - 8/2016

- Worked extensively with robotics, Arduino, and RC signals to create an extensible and affordable platform for robotics in education
- Developed a Monte Carlo localization algorithm through OpenCV, using monocular vision and SIFT feature-matching to localize within a map
- Implemented content-based image retrieval combined with machine learning

Mathematical Modeling Clinic, Claremont Graduate University

5/2014 - 8/2014

- Worked with a team of graduate students to research disease prevention
- Modeled spread of epidemic with discrete and continuous differential model
- Presented findings on disease vectors and prevention to board of sponsors

PERSONAL PROJECTS

Natural Language Generation Twitter Bot

9/2016 - Present

- Created framework for scheduling tweets from a remote Linux server
- Currently implementing an n -order Markov model for text generation
- Developing recurrent neural network using Theano and CUDA backend

Language Analysis of Online Communities

12/2015 - Present

- Developed with Reddit API, optimized API calls for bulk comment retrieval
- Filter out stop words by aggregating data from collective community
- Traverses comment trees and finds phrases unique to communities

AES Password-Based Cryptography

4/2015 - 9/2015

- Developed in Java using Cryptography Extension with 256-bit keys
- Password-based encryption keystores with alias and password system
- Implemented streamlined graphical user interface and file compression

Honors and Awards

- Harvey S. Mudd Merit Award
- National Merit Scholarship

9/2014 - Present

5/2014 - Present