Michael Zhang

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Education

University of California, Berkeley – B.A. Applied Mathematics &Computer Science(expected May 2017)

GPA – 3.43

Relevant coursework - Multivariable Calculus, Structure and Interpretation of Computer Programs, Data Structures and Programming Methodology, Linear Algebra and Differential Equations, Machine Structures, Discrete Mathematics and Probability Theory

Experience

Lab assistant(Summer 2014 - Present)

Taught students in computer science course (SICP) alongside teaching assistant

Lab review committee (Summer 2014)

Reviewed and modified courseworkto ensure that material is as streamlined as possible for students

Skills

Programming languages–Java, Python, C, familiar with Scheme,Scala, and MIPS

Miscellaneous–familiar with Autodesk Inventor

Projects

Tweet robot – A two wheel vehicle controlled by tweets. Assembled with the Texas Instruments Launchpad, custom 3D printed parts, and an Android phone. The Android phone uses an app that implements Google's Text to Speech API to read tweets when commanded to. Written in Java, C, and IBM's Node-RED. Built in a team at Cal Hacks.

Image compression – A simple image compression program that uses run length encoding to compress and decompress an image. Written in Scala.

Depth map generator – Creates a depth map given a left image and a right image. Includes quadtree image compression. Written in C.

Huffman encoder/decoder – A Java program that encodesand decodes text files and compresses file directories using Huffman encoding.

Dot matching game – A game in which the goal is to connect dots of the same color to earn points. Includes a simple AI that finds a combination that results in the most points. Written in Java.

Sliding block puzzle solver –Solves sliding block puzzles using depth first search. Written in Java.

Twitter Trends – A program that analyzed large collections of tweets and determined average sentiments for certain keywords for each of the 50 states. Written in Python.

Scheme interpreter – A Scheme interpreter written in Python.