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, HTML, CSS and MIPS assemblylanguage

Miscellaneous–familiar with Apache Spark andAutodesk 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.

Puzzle solver– Solves sliding puzzles using iterative MapReduce. Written in Python using Apache Spark and deployed on Amazon EC2.

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 encodes and decodes text files and compresses file directories using Huffman encoding.

Twitter Trends – A program that analyzes large collections of tweets and determines average sentiments for certain keywords for each of the 50 states. Uses Tkinter to present data visually. Written in Python.

Scheme interpreter – A Scheme interpreter written in Python.