Jayson Jeon

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Education **B.A. Computer Science — UC Berkeley, May 2017**

Relevant Coursework — Computer Programs (Python), Data Structures (Java), Machine Structures (C and MIPS), Web Design (HTML/CSS/JS), Artificial Intelligence, Linear Algebra and Differential Equations, Discrete Mathematics and Probability Theory

Experience **CS 61B (Data Structures) Lab Assistant, UC Berkeley – Jan 2015 - May 2015**

- Assisted students on lab assignments under the leading teaching assistant
- Created a spreadsheet to manage all lab assistants for the course staff

Projects **Image Depth Perception and Performance Optimization**

- Created a C program that can approximate depth within a stereo image
- Optimized the program to increase the operation rate from 1.7 Gflops to 24 Gflops
- Used loop reordering, loop unrolling, Intel SSE Intrinsics, and OpenMP techniques

Apache Spark MapReduce and Cloud Computing

- Used Apache Spark to find a solution to a game (sliding blocks on a board)
- Made flatmap, map, and reduce methods in Python that find the results to all possible moves then choose the winning moves
- Ran the code on a bigger scale on Amazon AWS EC2 servers

Huffman Encoding and File Compression

- Made a Java program that analyzes a text file and creates a compact version of the file
- Created a Huffman tree that optimizes data usage of the characters in the text file
- Program was able to translate the Huffman-encoded file back into the original file

Dots Game and AI

- Created a game in Java similar to Bejeweled (destroy same-colored dots in which at least 3 are connected)
- Made mechanisms that make dots fall as if they are affected by gravity and create random dots and drop them into the board whenever there are empty spaces
- Implemented a special rule in which destroying dots in a “closed shape” (a loop of dots) gives bonus points and an AI that finds the closed shape that would result in the most points

Twitter Trends and Geographical Mapping

- Created a Python program that visualizes specific word sentiments (good/bad) across the nation by assigning certain colors to states in a map of the US
- Used Twitter posts about a given word tagged with specific geographical locations
- Assigned sentiment values to each post using a dictionary of words to sentiments

Skills **Languages** — Python, Java, C, MIPS, HTML5/CSS3, JavaScript (JQuery)

Parallel Computing — Apache Spark, Intel SSE Intrinsics, OpenMP

Others — Git, Unix, Logisim, Multisim, Google Docs (functional spreadsheets)