

Jayson Jeon

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

Relevant Coursework — Structure and Interpretation of Computer Programs, Data Structures, Great Ideas in Computer Architecture, Multivariable Calculus, Linear Algebra and Differential Equations, Discrete Mathematics and Probability Theory, Linear Algebra (currently enrolled), Intro to Microelectronic Circuits (currently enrolled), Web Design (currently enrolled)

Experience **CS 61B Lab Assistant, UC Berkeley – Jan 2015 - Present**

- Assisted CS 61B (Data Structures) students on their weekly lab assignments

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, Scheme (familiar), Java, C, MIPS

Parallel Computing — Apache Spark, Intel SSE Intrinsics, OpenMP

Others — Git, Unix, Logisim, Google Docs (spreadsheets with functions)