# Jayson Jeon

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**Education**

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

**Relevant Coursework** — Computer Programs, Data Structures, Machine Structures, Algorithms, Databases, Security*, Artificial Intelligence, Machine Learning*, Linear Algebra/Diff Eq., Discrete Maths/Probability, Random Processes, Circuits, Web Design**, Big Data with Apache Spark***

**Experience**

**CS 61B (Data Structures) Lab Assistant, UC Berkeley – Jan 2015 - Dec 2015**
• Assisted students on lab assignments and projects under the teaching assistant
• Created a spreadsheet to manage all lab assistants for the course staff

**Projects**

**Popularity Ranking on StackOverflow**
• Implemented the PageRank algorithm with Python to find which topics on StackOverflow are the most popular (turned out to be Java and C)
• Used BeautifulSoup4 to parse through the web pages and find valid links and tags

**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

**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)

*Currently enrolled   **deCal course run by students   ***MOOC on edX offered by UC Berkeley