Daniel Zeng

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University of California, Berkeley *May 2020 (Expected)*
Computer Science, Bachelor's Degree GPA 3.92

Relevant Courses CS61B - Data Structures, CS70 - Discrete Math and Probability Theory, CS61A - Interpretation of Computer Programs, MATH54 - Linear Algebra, Machine Learning from Coursera

Skills
Languages: Python, Java, C++, Javascript, GNU Octave
Platforms/Tools: numpy, pandas, requests, sockets, matplotlib, Tensorflow, JUnit, Vaadin, Git, Bash

Experience
Research Assistant, Dal Bó Lab - UC Berkeley *Sept 2017 - Present*
- Developing algorithms for natural language processing and statistical analysis to identify past civilization trends
- Built methods for collecting archaeological articles using Crossref API and web scraping
- Implemented methods for text corpus processing to extract relevant information

Project Developer, Cal Launchpad *Sept 2017 - Present*
- Project Facelift: Implementing stacked convolutional neural networks in Tensorflow to compute facial depth from 2D image
- Using dlib to preprocess facial features and perform facial alignment

Research Intern, Bhatia Lab - Boston University *July 2016 - Aug 2016*
- Accelerated and automated the process of designing genetic circuits (synthetic biology) using machine learning
- Utilized Java libraries such as Encog ML Framework and Apache Math Library
- Created web interface using Vaadin to allow users to generate desired circuit functions

Projects
DeepBeat (Cal Launchpad) *Sept 2017 - Dec 2017*
- Music generation using machine learning built on top of Google's Magenta
- Researched a novel neural network architecture — phase functioned LSTM model
- Built methods for data processing on music MIDI files to utilize during network training

Chess Game (github.com/daniel-zeng/ChessGame) (Python, tkinter)
- Implemented minimax tree search with Alpha-Beta pruning, and position evaluation functions (piece square tables/piece values) to optimize the AI engine
- Playable through command-line with algebraic notation and GUI (tkinter)

Awards
USACO Gold (2017), HP Codewars (1st place in division) (2016), National AP Scholar (2017), FBLA Cyber Security States qualifier (2015)