Ari Oppenheimer

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Employment:

Research Assistant, UC Berkeley, August 2015 - May 2017

- Researched and implemented language processing algorithms to identify stylistic literary changes
- Wrote a Python library for literary analysis

Head Coach, Touchstone Climbing, December 2015 - July 2016

- Implemented predictive modeling system to provide early warning system for overuse injuries
- Facilitated exponential gains in athletes

Intern / Stage, Chez Panisse, August 2015 - December 2015

- Butchered and assisted in all aspects of menu and meal preparation

Production Engineer, Emerging Objects, July 2013 - January 2014

- Printed a 12'x12'x9' freestanding cement structure using 3D Systems ProJet CJP 360
- improved rate of successful prints by >50%, allowing substantial time and monetary savings

Education:

UC Berkeley (graduated Spring 2017) ; Bachelor of Art in English Literature, with significant extra-departmental coursework in Computer Science and Mathematics, listed below:
linear algebra and differential equations, discrete mathematics and probability, calculus, algorithms and data structures, efficient algorithms and intractable problems, time series analysis and sea level rise.

Projects:

Pick Items:

Wrote approximation algorithm for NP-Hard optimization problem "Pick Items" (similar to m-dimensional knapsack with incompatibility constraints, and complex decision-making). Solution scored in 80th percentile among classmates. Implemented strongly decoupled design allowing for continued iteration leading to significant speedups.

Coastal Flooding Risk-Analysis:

Fully assessed threat of coastal flooding at two California sites. Analyzed two datasets consisting of hundreds of millions of discrete datapoints to investigate accelerated sea level rise. Reverse engineered harmonic constituents to filter out tidal variability and identify flooding events.

Text Edit:

Designed and wrote a derivative of TextEdit in Java. Supported functionality: saving, keyboard shortcuts, scrolling, copy/paste, keyboard navigation, mouse navigation.

Languages, Libraries, etc:

Python, Java, LISP [Scheme], C++ (learning), Pandas, Numpy, NLTK, Git, SQL, Unix [Bash], HTML (novice)