DANIEL LI

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EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY   Aug 2014 – 2017

Candidate for double major in:
B.S. Electrical Engineering and Computer Sciences
B.A. Applied Mathematics   Berkeley, CA

- *Academics*: 3.5 cumulative GPA
- *Coursework:* **Computer Science:** Structures and Interpretations of Programs, Data Structures and Algorithms, Computer Architectures, Human Computer Interaction | **Mathematics:** Integral, Differential, Vector, Multivariable, Lambda Calculi, (Partial) Differential Equations, Linear Algebra, Discrete Mathematics, Probability Theory | **Electrical Engineering & Physics:** Mechanics, Electricity, Magnetism, Designing Information Devices and Systems I,II
- *Skills:* Python, Java, SQLite, Scheme, HTML, LaTeX, R, digital signal processing (DSP)

LA CANADA HIGH SCHOOL   Fall 2011 – 2014

- *Academics:* 4.7/4.0 weighted GPA, 4.0/4.0 GPA, 2310 SAT
- Graduated in 3 years , ranked 2nd out of 400

RESEARCH EXPERIENCE

Pachter Labs   Fall 2015 – Present
Computational Mathematics and Genomics   Berkeley, CA

- Research in novel approach to RNA-sequencing with the following features abundance estimation, transcript annotation difficulties, differential expression
- Computationally analyze large data using Principle Component Analysis (PCA)

PROJECTS

SLEUTH – R (Pachter Labs)

- Project for analysis of RNA-sequencing experiments
- Implements statistical algorithms for differential analysis for pseudo-alignment of RNA transcripts with interactive plots for real-time exploratory analysis
- Novel approach decreasing analysis time of 30 million human reads in less than 3 minutes

GITLET – Java

- Implemented a version control system similar to Git
- Fully functioning Git suite (merge, rebase, commit, etc)
- Designed abstract data structures to maximize efficiency

AUTOCOMPLETE – Java

- Implemented a word searching program similar to Android and iPhone autocomplete suggestion
- Designed a Ternary Search Trie ADT to optimize run times for searching vast dictionaries

AWARDS AND HONORS

MIT THINK   Spring 2014
Designed a Novel Approach to Mitigate Earthquakes   Cambridge, MA

- Awarded $2,000
- Created a prototype with Arduino sensors, fiberglass fabrication, and coding in C#

VOLUNTEER EXPERIENCE

OAKLAND SERVES   Aug 2015– Present
Mentor   Berkeley, CA

- Tutor and Mentor a student in STEM subject fields that is at risk of dropping out
- Volunteered in new pilot initiative to curb dropout rates