

# 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:** 3.51 GPA
- **Coursework: Computer Science:** Structures and Interpretations of Programs, Data Structures and Algorithms, Computer Architectures | **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
- **Skills:** Python, Java, SQLite, Scheme, HTML, LaTeX, R

### 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 2<sup>nd</sup> 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