

DANIEL LI

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EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY

Aug 2014 – 2017

B.S. Electrical Engineering and Computer Sciences

Berkeley, CA

- **Academics:** 3.5 cumulative GPA
- **Coursework: Computer Science:** Structures and Interpretations of Programs (SICP), 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, C, 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 Group

Fall 2015 – Present

Computational Biology (Mathematics and Genomics)

Berkeley, CA

- Research in novel approaches to RNA-sequencing with the features in abundance estimation, transcript annotation difficulties, differential expression
- Current investigation on the improvement of bulk cell RNA-seq analysis and new approach to single cell RNA-seq analysis

PROJECTS

SLEUTH – R (Pachter Group)

- Implement statistical algorithms for differential analysis for pseudo-alignment of RNA transcripts with interactive plots for real-time exploratory analysis
- Visualization of bias weights of RNA through integration of bias weights and hexamer indices

KALLISTO – C++ (Pachter Group)

- Novel approach decreasing analysis time of 30 million human reads in less than 3 minutes
- Optimization of statistical likelihood model through non uniform distribution analysis for more accurate projections onto correct subspaces

GITLET – Java

- Implemented and designed a version control system similar to Git with ADT's to maximize runtime
- Fully functioning Git suite (merge, rebase, commit, etc)

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