**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