DANIEL LI

(949) 923 - 8662 | 16 Camellia, Irvine, CA 92620 | li.daniel@berkeley.edu |
Github: danielli97 | LinkedIn: danielli97 | Website: daniel-li.me

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, 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 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 Group)

- Project for analysis of RNA-sequencing experiments
- 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 indexes

KALLISTO – C++ (Pachter Group)

- Novel approach decreasing analysis time of 30 million human reads in less than 3 minutes
- Used such high dimensional data vectors for sleuth's analysis of bias weights

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