

# DANIEL LI

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## EDUCATION

### UNIVERSITY OF CALIFORNIA, BERKELEY

Aug 2014 – May 2017

#### **B.S. Electrical Engineering and Computer Sciences**

Berkeley, CA

- **Academics:** 3.6/4.0 GPA
- **Coursework: Computer Science:** Efficient Algorithms and Intractable Problems, Human Computer Interaction, Algorithms in Computational Biology, Structures and Interpretations of Programs (SICP), Data Structures and Algorithms, Computer Architectures | **Mathematics:** Integral, Differential, Vector, Multivariable, Lambda Calculi, (Partial) Differential Equations, Linear Algebra, Discrete Mathematics, Probability Theory and Statistics, (some) Algebra | **Electrical Engineering & Physics:** Mechanics, Electricity, Magnetism, Designing Information Devices and Systems I,II
- **Skills:** Python, Java, C, SQLite, Lisp - Scheme, HTML, LaTeX, R, MIPS, Assembly, Data Analysis, Digital Signal Processing (DSP), Android Studio app development

### LA CANADA HIGH SCHOOL

Fall 2011 – Spring 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 Group – Principal Investigator: Lior Pachter**

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 and single cell RNA-seq analysis

### **Rao Group – Principal Investigator: Satish Rao**

Spring 2016 – Present

#### **Algorithms, Theory, Optimization on Computational Biology**

Berkeley, CA

- Investigating phylogenetic algorithms
- Optimization of paths for said phylogenetic algorithms

## INDUSTRY EXPERIENCE

### **Factual**

Summer 2016

#### **Research and Development (R&D) Intern**

Los Angeles, CA

- Operating the data extraction pipeline through quality evaluation, localespecific extraction, canonicalization, and decanonicalization
- Developing, maintaining, and documenting new processes for data extraction and presentation

## PROJECTS

### **KALLISTO – C++ | R | Python (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

### **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

## AWARDS AND HONORS

### **MIT THINK**

Spring 2014

#### **Designed a Novel Approach to Mitigate Earthquakes**

Cambridge, MA

- Awarded \$2,000