

# Daniel Li

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## EDUCATION

### UNIVERSITY OF CALIFORNIA, BERKELEY

B.S.C. IN ELECTRICAL ENGINEERING & COMPUTER SCIENCE

Fall '14 - Spring '17 | Berkeley, CA

Note: Graduate School (PhD) Intended  
GPA: 3.63/4.0

### LA CANADA HIGH SCHOOL

Fall '11 - Spring '14 | La Canada, CA  
GPA: 4.7/4.0

## SKILLS

### PROGRAMMING

Python (Scikit Learn, NumPy, etc.) • Java •  
R •  $\text{\LaTeX}$  • HTML • CSS • JavaScript

### MATHEMATICS & STATISTICS

Calculus: Integral • Differential • Vector  
Multivariable • Lambda • (Partial)  
Differential Equations • Linear Algebra  
Probability Theory • Bayesian Inference  
(Some) non-Parametric Statistics •  
(Some) Algebra

### FRAMEWORKS & MISC.

Git/VCS • Apache Spark • Hadoop •  
Digital Signal Processing • Circuit and  
Design • Android Studio

## LINKS

Github:// [RemarkablyAverage](#)  
LinkedIn:// [RemarkablyAverage](#)

## COURSEWORK

### GRADUATE

Algorithms & Uncertainty  
Combinatorial Algorithms & DS  
Computational Geometry  
Special Topics in Deep Learning

### UNDERGRADUATE

Efficient Algorithms  
Computational Photography  
Computer Architectures  
Human Computer Interaction  
Discrete Mathematics  
Probability Theory  
Designing Information Systems I, II

## RESEARCH EXPERIENCE

### PACHTER GROUP | UNIVERSITY OF CALIFORNIA, BERKELEY

RESEARCH ASSISTANT

Fall 2015 – Present | Berkeley, CA

Principal Investigator: Professor **Lior Pachter**

- Research in novel approaches to RNA-sequencing with the features in abundance estimation transcript annotation difficulties, differential expression
- Current investigation on improving single cell RNA-seq analysis through high dimensional statistics and machine learning methods

### RAO GROUP | UNIVERSITY OF CALIFORNIA, BERKELEY

RESEARCH ASSISTANT

Summer 2016 – Present | Berkeley, CA

Principal Investigator: Professor **Satish Rao**

- Research in phylogenetic algorithms and optimization of estimation accuracies on various trees and super tree reconstruction
- Current investigation on faster multiple sequence alignment (MSA) methods

## INDUSTRY EXPERIENCE

### NEC LABORATORIES RESEARCH INTERN

Summer 2017 | Princeton, New Jersey

- Researched deep learning problems focused on memory based networks and video action recognition with work slated for submission to ICLR/NIPS.
- Only undergraduate research assistant in Ph.D level work and in the accepted candidate pool

### FACTUAL SOFTWARE ENGINEERING INTERN

Summer 2016 | Los Angeles, CA

- Worked on probabilistic deduplication, entity resolution, and record linkage of various locations databases with investigation into several methods such as Latent Dirichlet Allocation, non-parametric Bayesian inference
- Improved various metrics such as F1 score, RMSE, log loss

## PROJECTS

### SLEUTH R

- Implement statistical algorithms 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

### SCRNA ERROR CORRECTION PYTHON

- Investigate data re-imputation through various maximum likelihood estimators, Bayesian inference, and Latent Dirichlet Allocation

## AWARDS

2016	top 10%	Dean's Honors List College of Engineering
2014	top 3/250	MIT Think Award