# Dibya Ghosh

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## EDUCATION

**UC BERKELEY**
Bachelors in Computer Science
Bachelors in Statistics
GPA: 4.00 | Expected 2019

**CALIFORNIA HIGH SCHOOL**
San Ramon, CA | Highest Honors
Cum. GPA: 4.85 | June 2015

## CLASSES

*Completed by Spring 2017*

*Data Science*
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|---|---|
| CS 8 | Intro to Data Science |
| CS 188 | Artificial Intelligence |
| CS 189 | Machine Learning |
| EE 127 | Convex Optimization |

*CS Theory*
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|---|---|
| CS 61A | SICP |
| CS 61B | Data Structures |
| CS 61C | Computer Architectures |
| CS 170 | Efficient Algorithms |
| CS 174 | Probabilistic Algorithms |

*Statistics*
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|---|---|
| STAT 88 | Stats in Data Science |
| STAT 134 | Probability |
| STAT 155 | Game Theory |

*Mathematics*
| | |
|---|---|
| CS 70 | Discrete Mathematics |
| MATH H104 | Hon. Real Analysis |
| MATH 110 | Linear Algebra |
| MATH H113 | Hon. Abstract Algebra |

## LINKS

Github:// **dibyaghosh**
LinkedIn:// **dibyaghosh**

## SKILLS

**Application Development**
Java · Python · C++

**Web Development**
Javascript · HTML · SQL

**Scientific Computation**
Matlab · LaTeX · R · NumPY/SciPY

## EXPERIENCE

**UC BERKELEY** | Undergraduate Student Instructor : Jan 2017 - Present
- Designed and wrote curriculum for UC Berkeley's new *data science* tailored probability course
- Taught 60 students through discussion sections (8-hr appointment)
- Revised the textbook, *Computational and Inferential Thinking*, and developed exercises to include in practice sets or assignments.

**LAWRENCE BERKELEY NATIONAL LABRATORY** Mar 2016 - Present
- Performing research in algorithm design for scalable statistical analysis of genomic data under Dr. Benjamin Brown
- Currently focused on determining higher-order interactions between variables through Random Forest ensembles and randomized partitioning algorithms
- Designing and implementing a stochastic distributed community detection algorithm to ascertain structure in network data

**UC BERKELEY** | Data Science Course Development: Jan 2016 - Dec 2016
- Designed materials and datasets for UC Berkeley's Data Science class
- Explored appropriate datasets for course materials, running statistical analyses of datasets in Python, NumPY, and Pandas
- Revised the textbook, *Computational and Inferential Thinking*, and developed exercises to include in practice sets or assignments.

**MATHNASIUM** | Math Instructor and Tutor
April 2015 – July 2015 | Pleasanton, CA
Tutored students from Kindergarten to 12th grade in subjects up to Calculus

## PROJECTS

**BIDS DATA SCIENCE ECOSYSTEM MAPPING** | Jan 2016- June 2016
Mapping relationships/roles of institutions in the data science community

- Applied unsupervised learning techniques to find graph clusters and identify communities of and topics in data science research.
- Developed a web interface with D3, Flask, and SQL to display network graphs and relevant institution data

**TUMOR ANGIOGENESIS MODELLING** | 6/2014-5/2015
A computational simulation of blood vessels during initial tumor growth

- Awarded 3rd place in Computational Bioinformatics at Intel International Science Fair and featured at Intel Developer Forum 2015

## AWARDS

| | | |
|---|---|---|
| 2015-Present | UC Berkeley | Dean's Honor List (top 4%) |
| 2016 | UC Berkeley | Kraft Award for Freshmen |
| 2015 | International | 3rd Place at Intel International Science Fair |
| 2015 | $1^{st}$/50 | Intel Award for Computer Science |
| 2015 | $1^{st}$/400 | Chevron Award for Innovation |

## PUBLICATIONS

[1] S. A. Ani Adhikari, Dibya Ghosh et al. Theory meets data: A data scientist's handbook to statistics.

[2] D. Ghosh. Development of a Computationally Optimized Model of Cancer-induced Angiogenesis through Specialized Cellular Mechanics. *ArXiv e-prints*, Feb. 2015.