

Education

Harvard Medical School

PhD in Bioinformatics and Integrative Genomics

Aug '19 – ??

Planned rotations in bioinformatics algorithm development, statistical genetics, and population genetics.

University of California, San Diego

B.S. Bioengineering: Bioinformatics (GPA: 3.75)

Sep '15 – Jun '19

Graduate Coursework: Algorithms for Scalable Biological Data Analysis, Big Data in Computational Molecular Biology, Network Biology & Biomedicine, Medical and Population Genetics

Undergrad Coursework: Mathematical Analysis, Data Structures, Advanced Algorithms, Probability and Statistics in Bioinformatics, Biological Databases

Publications & Presentations

Identifying statistically significant chromatin contacts from Hi-C data with Fit-Hi-C *Nature Protocols*. First author. Submitted after invitation and revision October 2018.

Measuring the quality and reproducibility of Hi-C data *Genome Biology*. Sole undergraduate author. Submitted September 2017

Small Molecule Inhibition of cAMP Response Element Binding Protein in Human Acute Myeloid Leukemia Cells *Molecular Cancer Therapeutics*. 2nd undergraduate author. Published June 2016

Research Experience

Bafna Lab

DEPARTMENT OF COMPUTER SCIENCE, UC SAN DIEGO

Computational Research Assistant

Jun '18 – Present

Developing novel algorithms to analyze evolutionary dynamics in the context of extrachromosomal DNA fragments in cancerous cells. Awarded \$2,500 through the Halicioglu Data Science Fellowship ([HDSI Fellowship](#)) to support the research.

Sunyaev Lab

DEPARTMENT OF BIOMEDICAL INFORMATICS, HARVARD MEDICAL SCHOOL

Computational Research Assistant

Jun '18 – Present

Developed [NovaSplice](#) and [Simdigree](#) (see Github for more info). Awarded an AWS grant of \$9,400 to apply NovaSplice on patients in the Undiagnosed Disease Network.

Ay Lab

VACCINE DISCOVERY, LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY

Computational Research Assistant

Jun '16 – Present

Developed [HiCKRy](#) and [Fit-Hi-C](#) (see Github for more info).

Professional Activities

Undergraduate Bioinformatics Club

UC SAN DIEGO

A community of undergraduate bioinformaticians at UC San Diego serving to strengthen, expand, and support UCSD's bioinformatics program.

President

Apr '17 – Present

Created a community service collaboration with [Illumina](#), initiated planning for a future Bioinformatics Department within the Jacobs School of Engineering, and grew mentorship program participation 4-fold.

Vice President of External Affairs

Jun '16 – Apr '17

Organized a year-long speaker series where faculty members and industry leaders within bioinformatics could advise our member base. These included talks from leaders in academia, such as, [Dr. Trey Ideker](#) and [Dr. Pavel Pevzner](#). As well as, speakers in industry, ranging from large companies like Illumina to promising startups like [Animantis](#).

Biomedical Engineering Society

UC SAN DIEGO

Lab Expo Co-Chair

Mar '16 – Jun '18

Oversaw the hosting of UCSD's largest on-campus research fair with a goal of increasing appreciation of science. Planned and implemented attendee recruiting efforts that resulted in event registration increasing to 500+ attendees. Presenters came from 7 diverse departments and presented research ranging from Bioengineering to pure Mathematics.

Projects Page

Please visit [my Project page](#) for an overview of all of my relevant projects

Skills

Computer Science: Python, C++, Java, R, \LaTeX , UNIX, HTML, CSS, Javascript, Github, Anaconda/PyPi, Golang

Wet Lab: Western Blots, DNA gels, Tissue Culture, DNA Extraction/Sequencing, CRISPR