

Education

Princeton University

September 2015- May 2019

B.S.E in Computer Science, Certificates in Statistics and Machine Learning, Quantitative and Computational Biology

Coursework: Algorithms and Data Structures, Programming Systems, Contemporary Logic Design, Statistics, Linear Algebra, Multivariable Calculus, Mechanics, Electricity + Magnetism, Quantitative Principles in Cell + Molecular Biology, Mandarin Chinese

Skills

Software Development

- Java
- Python
- C
- Assembly (x86_64)
- JavaScript
- HTML5/CSS3 (Bootstrap)
- MATLAB
- Git

Data Science

- R (dplyr, tidyr, ggplot2, shiny, chloroplethr, rmysql, grid)
- Python
- SQL

Wet Lab

- Gel electrophoresis
- PCR
- Restriction mapping
- Site-directed mutagenesis

Experience

Undergraduate Grader

2016 - Present

Princeton University Department of Computer Science

- Graded and provided feedback for student-submitted programming assignments in Java for 400+ student course.

Data Science Intern and Web Developer

Summer 2016

Harvard-MIT HST Bioinformatics Program

- Developed web tool for visualizing geographic trends in AETNA insurance and US Census data using R and MySQL.
- Performed analysis on diabetes and BRCA incidence as proof-of-concept of tool – pending publication.
- Contributed to open-source client-side web application for bioinformatics analysis (www.ubit2.com) - pending publication.

Leadership

Experience Team

2016 - Present

HackPrinceton

- Coordinated bus routes to Maryland and Canada and created “starter guide” for beginners. Hackathon hosted 600+ hackers.

Cofounder and Director

2016 - Present

Princeton University Science Olympiad

- Recruited 100+ volunteers, won \$5000 in funding from eleven academic centers, handled logistics for all 23 competition events.
- 600 high school students will compete on Princeton’s campus, come February 4th, 2017.

Logistics Director

2016 - Present

PUMaC (Princeton University Math Competition)

- Worked with public safety to set building access permissions, ordered food, t-shirts, trophies/medals and organized staff trips.

Projects

UBIT2

Open-source client-side web app for visualization and analysis of RNA-seq and qPCR data. Computation done entirely in browser.

Technologies Used: JavaScript (jQuery, D3), HTML5/CSS3 (Bootstrap)

CWAS

Plots choropleth maps of USA at the county, state or regional level from user-inputted data, AETNA claims or US census data

Technologies Used: R (Shiny, chloroplethr, ggplot2, rmysql, grid), MySQL

Meal Scheduler

Generates unique meal-pairings week-by-week given list of people such that no two will eat twice. Built for a club on campus.

Technologies Used: Java

Publications

[2] Kopp, Z. A, Hsieh, J, Li, A, Wang, W, Bhatt, D. T, Lee, A, Kim, S. Y, Fan, D, ... Park, Y. (2015). Heart-specific Rpd3 downregulation enhances cardiac function and longevity. *Aging*, 7(9), 648-660. doi:10.18632/aging.100806

[1] Lin, S, Wang, X, Kamiya, Y, Chern, G, Fan, F, Fan, D, ... Cheong, S. (2014). Topological defects as relics of emergent continuous symmetry and Higgs condensation of disorder in ferroelectrics. *Nature Physics*, 10(12), 970-977. doi:10.1038/nphys3142

Awards Won

Princeton Innovation Magazine 25 Under 25

February 2016

Intel Science Talent Search Semifinalist

January 2015

USA Biology Olympiad Semifinalist

March 2015