# David Fan

http://davidfancv.com
dfan@princeton.edu | 908.392.0562

## EDUCATION

**PRINCETON UNIVERSITY**
B.S.E in Computer Science
Cert. in Computational Bio
2015-2019

**MONTGOMERY HIGH SCHOOL**
High Honors
GPA: 98.57% (4.0) | SAT: 2390 | SAT II
(800): Biology, Chemistry, Math
2011-2015

## SKILLS

**PROGRAMMING**
Proficient:
Java
Working:
Python • Git • HTML/CSS • LaTeX •
Wordpress
Learning:
SQL • Javascript

**LAB**
Gel electrophoresis, high-temperature
resistivity measurement, crystal
depth-profiling analysis, *Drosophila* fly
work, paper writing, poster presenting

## COURSEWORK

**CURRENT**
Introduction to Computer Science
Multivariable Calculus
General Physics I
Writing Seminar
Intensive Third-Year Modern Chinese I

**SPRING SEMESTER**
Algorithms and Data Structures
Linear Algebra
General Physics II
Fundamentals of Statistics

**HIGH SCHOOL**
APs: Computer Science, Physics C
Mechanics and E+M, Calculus AB/BC,
Chemistry, Biology, English Language
+ Lit, Micro/Macroecon, US History

## LINKS

Github:// **dfan97**
LinkedIn:// **davidfan97**

## RESEARCH AND PUBLICATIONS

**NEW JERSEY MEDICAL SCHOOL** | Paid Research Intern
Jun. 2014 – Aug. 2014 | Dept. of Cell Biology and Molecular Medicine
Explored effects of Ras GTP-RAF-MEK-ERK signaling pathway in *Drosophila* fruit flies
on organismal + organ senescence. Conducted lifespan + stress assays on transgenic
flies and in-vivo heartbeat measurements. My data is published in Figures 5+7.
**(Aging - Sept. 2015):** *Heart-specific Rpd3 downregulation enhances cardiac function and
longevity.*

**RUTGERS UNIVERSITY PHYSICS** | Paid Research Intern
Jun. 2013 – Aug. 2013 | Center for Emergent Materials
Explored symmetry-breaking phase transitions in rare-earth hexagonal manganites
(multiferroic). Polished and depth-profiled these materials to analyze topological
defect distribution. My data is published in Figure 3 of paper.
**(Nature Physics - Dec. 2014):** *Topological defects as relics of emergent continuous
symmetry and Higgs condensation of disorder in ferroelectrics.*

## PERSONAL PROJECTS

**CHARITOURNEY** | BattleHack NYC 2015 (click link)
- Web app that features charities in brackets to win funds from the public.
- Built on Node.js + Postgre SQL framework and Javascript, Jade and CSS

**SHADE** | AP Computer Science Final Project
- Simple platformer game using Java that incorporates multi-class inheritance.

## EXPERIENCE

**5ETEK** | Intern + Web Developer
Jun. 2015 – Aug. 2015 | Skillman, NJ
- Developed step-by-step learning modules using 5eTEK's proprietary circuitry
  platform. **Example:** (Click link. Mine in particular is still under development)
- Built website to showcase community projects using Wordpress and
  customized PHP/HTML/CSS.

**YU'S ELITE CENTER** | Instructor
Apr. 2015 – Jun. 2015 | Bridgewater, NJ
- Taught fast-paced Science Olympiad competition prep to middle schoolers.
- Developed all teaching materials and handouts by myself.

## AWARDS AND HONORS

| Year | | Award |
|------|------|------|
| 2015 | National | Intel Science Talent Search (STS) Semifinalist |
| 2015 | National | USA Biology Olympiad (USABO) Semifinalist |
| 2015 | School | MHS Visionary Award for STEM Outreach |
| 2015 | top 0.1% | National Merit Scholarship Winner |
| 2015 | State | NJ Science Olympiad Gold Medalist (x4): 2011, 2013-15 |
| | | NJ Science Olympiad Top 4 Team 2010-2015 |
| 2014 | 80/1000 | Governor's School of Engineering and Tech. Scholar |
| 2014 | 10th/200 | Merck Science Day Competition |