# David Fan

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## EDUCATION

### PRINCETON UNIVERSITY
B.S.E in Computer Science
Cert. in Computational Bio
2015-2019
GPA: 3.8/4.0 (midterm)

### MONTGOMERY HIGH SCHOOL
High Honors
2011-2015
GPA: 4.0/4.0 | SAT: 2390 | SAT II (perfect): Biology, Chemistry, Math

## SKILLS

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

### LAB
Gel electrophoresis, high-temperature transport (i.e. resistivity) measurements, depth-profiling analysis, applications of graph theory to materials, *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
*Advanced Placement* (AP): Computer Science, Physics C Mechanics/Electricity and Magnetism, Calculus AB/BC, Chemistry, Biology, English Language + Literature, Micro/Macroeconomics, US History, Environmental Science, Chinese, Psych.

## MY LINKS

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

## RESEARCH AND JOURNAL 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
Depth-profiled topological defect distribution in rare-earth hexagonal manganites annealed from above ferroelectrical critical point to provide experimental basis for derivation of vortex-antivortex correlation function. My data is published in Figure 3.
(Nature Physics - Dec. 2014): ***Topological defects as relics of emergent continuous symmetry and Higgs condensation of disorder in ferroelectrics.***

## PERSONAL PROJECTS

### STAYFRIENDZ | HackPrinceton 2015
- Web app that reminds you to eat with people you haven't seen in a while.
- Uses Express.js, Postgre SQL, Facebook Graph API; hosted on Heroku

### 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.

## WORK EXPERIENCE

### 5ETEK (SECOND YEAR STARTUP) | Partner + Web Developer
Jun. 2015 – current | Skillman, NJ
- Developed growth and marketing strategies, launched outreach campaign at local high schools, rewrote 5 year company mission statement and wrote competition grant applications.
- Developed step-by-step circuitry modules for 5eTEK's proprietary platform. Incorporated into STEM curriculum for local schools
- Built showcase website for community projects using Wordpress and PHP/HTML/CSS.

### YU'S ELITE CENTER | Instructor
Apr. 2015 - current | Bridgewater, NJ
- Teach fast-paced Science Olympiad competition prep to middle schoolers.
- I individually develop all curriculum for the class.

## AWARDS AND HONORS

| | | |
|---|---|---|
| 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 | $10^{th}$/200 | Merck Science Day Competition |