

David Fan

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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

UPCOMING 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

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