

# David Chen

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## EDUCATION

### Princeton High School

Princeton, NJ

Anticipated graduation: June 2021

- Unweighted GPA: 4.0 | Weighted GPA: 4.64
- Relevant Coursework: Geometry I Accelerated, Pre-Calc Accelerated, AP Calculus BC, AP Statistics, Intro to Java Accelerated, Object Java Accelerated, AP Computer Science, Biology I Accelerated, Chemistry I Accelerated, AP Physics I
- National AP Scholar

## EXAMS

- **PSAT:** 1500, **SAT:** 1550, **ACT:** 36, **SAT II Math:** 800
- **AMC 10:** 114, **AMC 12:** 108, **AIME:** 8

## AWARDS AND COMPETITIONS

- **HackPHS:** 3<sup>rd</sup> place out of 58 teams from around NJ
- **Project Euler:** Ranked in top 0.4% of 1 million users
- **PicoCTF:** Placed in the top 50 for U.S. Middle/High Schools out of 5141 teams

## EXTRACURRICULARS

### PHS Math Team

2017 – Present

#### Captain

- Participate in many competitions, including: Princeton University Mathematics Competition, Harvard-MIT Mathematics Tournament, Lehigh Valley High School Math Contest, USMCA National Finals
- Meet weekly to collaborate in solving challenging problems; practice in both individual and team settings

### PHS Algorithms Club

2018 – Present

- Meet weekly to engage in discussions about innovations and concepts relevant to data structures and algorithms
- Achieved USACO Gold rank, Top 1000 for pre-college students in the U.S.
- Won Lockheed Martin Code Quest in Moorestown, NJ
- 2<sup>nd</sup> Place in Montgomery Blair Informatics Tournament

### The Tower Newspaper

2020 – present

#### Online Section Editor

- Upload articles each issue and maintain website for all viewers, increase online presence through Facebook posts
- Adapt new feature changes, record analytics, and manage advertisement placement through Wordpress

## VOLUNTEERING

### Creating Ties

Summer 2019

- Designed solar water heaters for Amaru, a remote village in Peru
- Lived in community for a week; attended cultural celebrations and aided families in cooking and weaving
- Visited every class in an elementary school: brought supplies to teachers and taught games to children

### PHS UNICEF

2018 – Present

#### Vice President

- Fundraise and spread awareness for underprivileged children around the world; collaborate with other clubs
- Give educational presentations on UNICEF's chosen theme of the month to club members

### PHS IDEAS Center

2018 – 2019

- Tutored weekly in math and programming; offered homework help, test prep, and time management coaching

## SKILLS & ACTIVITIES

- **Languages:** Proficient in Mandarin and Spanish
- **Programming Languages & Software:** Python (fluent), C++ (proficient), Java (proficient), Git, Sublime, Linux, Latex
- **Activities:** Princeton Soccer Association, PHS JV Soccer, PHS Ultimate Frisbee Club

## SPECIAL PROJECTS & INDEPENDENT STUDY

- **Arduino Obstacle Avoiding Car** ([source code](#)): Built and programmed a 4 wheel Arduino car with ultrasonic distance calculation to avoid bumping into objects.
- **Ruzzle Solver** ([source code](#)): Designed a program to play Ruzzle, a mobile word finding game in a 4x4 grid. Utilized optical character recognition, custom trained models, graph theory, and Android automation.
- **Stock Analyzer:** ([information](#)): Designed a website to analyze stock data and predict future market movements. Utilized Twitter API, Google Natural Language API, fast.ai deep learning model, flask, and basic web design.
- **Machine Learning:** ([course site](#)): Online course in machine learning offered by Stanford University on Coursera
- **Deep Learning:** ([course site](#)) ([final project](#)): Practical deep learning course offered by the research institute fast.ai
- **CS221 - Artificial Intelligence:** ([course site](#)) ([final project](#)): Graduate level online course in AI offered by Stanford University
- **CS231n - Computer Vision:** ([course site](#)): Graduate level online course in Computer Vision offered by Stanford University
  - Kaggle MNIST Digit Recognizer ([notebook](#)) - rank 230/3000: tensorflow, CNNs, data augmentation, annealers, ensembles