

David Chen

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Education

Harvey Mudd College

B.S., Computer Science | Harvey S. Mudd Merit Scholar

Claremont, CA

Aug 2021 - May 2025

Princeton High School

GPA: 4.0/4.0 (4.64/5 weighted), National Merit Scholar, National AP Scholar

Princeton, NJ

Sep 2017 - Jun 2021

Relevant Coursework: AP Computer Science, Algorithms, Multivariate Calculus & Linear Algebra, AP Statistics

Independent Study

Stanford graduate-level courses: Artificial Intelligence, Computer Vision, Natural Language Processing, Deep Learning

Work Experience

Slingshot

SOFTWARE ENGINEER

Oct 2020 - Present

- Develop responsive automation portal UI components with React for seamless mentor/intern collaboration
- Unify Trello, GitHub, and Google Apps to simplify pipeline from intern applications to onboarding
- Modularize, document, and update deprecated code bases to modern development standards
- Wrote the UAE's first national algorithmic codathon, identifying talent and tripling Discord server to 400 members

MACHINE LEARNING RESEARCH INTERN

Jul 2020 - Oct 2020

- Selected from top 3% of hundreds of applicants worldwide based on technical skill and leadership potential
- Researched keystroke dynamics and built React Native mobile app for non-intrusive continuous user identification
- Reached 89% accuracy compared to 68% from baseline KNN models, integrated NLP through TensorFlow and scikit-learn

Hinkson's, The Office Store

Princeton, NJ

WEEKEND STORE MANAGER

Dec 2019 - Present

- Properly open/close store, maintain clean environment, recommend stationary supplies, operate register

Leadership Experience

PHS Math Team

Princeton, NJ

CAPTAIN

2016 - Present

- Curate topics, design resources, and organize competitions for 30 members with a focus on teamwork and engagement
- Qualify and compete in national tournaments (PUMaC, HMMT, CMIMC); 2nd at USMCA National Finals

PHS Algorithms Club

Princeton, NJ

CAPTAIN

2017 - Present

- Adapt complex material and teach 20+ members algorithmic topics weekly, hold monthly mock contests
- Strengthen pattern recognition and efficiency in competitions, inform about CS and career advice

Princeton Soccer Association

Princeton, NJ

CAPTAIN

2011 - 2020

- Dedicated team player and leader, motivated national level team (top 30 NJ) in competitions across east coast

Projects

Ruzzle Solver

Optical character recognition, Android automation

- Designed first fully automated mobile-only Python program to automate a word finding game
- Reduced calculation and execution time from 35s to 200ms using image preprocessing, prefix tries, and graph theory

Reddit Username Generator

TensorFlow, TF.js, React, Flask, Heroku

- Trained LSTMs and GRUs on 400k usernames for text generation, integrated into React through TensorFlow.js and Flask

pingmote (Poor Man's Discord Nitro)

Python, Tkinter, GUIs, PIL

- Developed hotkey triggered cross-platform global emote picker to create and quickly insert custom images and gifs

Digit Recognition With MNIST

Transfer learning, data augmentation, regularization, ensembles

- Experimented with various CNN architectures on 42,000 images, reached 99.664% test accuracy (top 150/2000+ on Kaggle)

Arduino and Raspberry Pi Self-Driving Car

End-to-end electronic development, PID control

- Built robot to avoid obstacles and follow lines, tuned ROS models in Gazebo simulation to speed up maze navigation by 37%

Awards

Math Contests: AIME: 8 (3x qualifier, AMC 12 distinction), CMIMC Combo/CS (5th), PUMaC (Indiv. Finals)

2019 - 2021

Competitive Programming: USACO Gold, Lockheed Martin (1st), Lexington (2nd), Montgomery Blair (2nd)

2017 - 2021

Carnegie Mellon Cybersecurity PicoCTF: Top 50 of 5,000+ teams and 25,000 people

2019

HackPHS: 1st (2020): SMS-based virtual learning, 3rd (2019): Sentiment driven AI investing advisor

2019 - 2020

Skills

Languages: Fluent in Python; Familiar with HTML/CSS/JS, Java, C/C++, TypeScript

Technologies: React, Firebase, TensorFlow, scikit-learn, pandas, Flask, SQL, Git, Latex, Linux