

# David Chen

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## Education

### Harvey Mudd College

Claremont, CA

B.S. in Computer Science (GPA: 3.95), Dean's List, Harvey S. Mudd Merit Scholar

Aug 2021 - May 2025

Relevant Coursework: Data Structures, Multivariable Calculus, Linear Algebra, Discrete

Activities: Student Mentor, CS 42 Grader/Tutor, Game's Club Co-President, Volleyball, Badminton, Frisbee, Spikeball

### Princeton High School

Princeton, NJ

GPA: 4.0/4.0 (4.7/5 weighted), National Merit Scholar, National AP Scholar

Sep 2017 - June 2021

Activities: PHS Math Team (Captain), PHS Algorithms Club (Captain), Princeton Soccer Association (Captain)

Relevant Coursework: AP Computer Science, Data Structures and Algorithms, Multivariate Calculus and Linear Algebra, AP Statistics

### Independent Study

Stanford graduate courses (CS221, 231n, 224n, 230): Artificial Intelligence, Computer Vision, Natural Language Processing, Deep Learning

## Work Experience

### Google

Pittsburgh, PA

STEP INTERN - CLOUD AI AND INDUSTRY SOLUTIONS

May 2022 - Aug 2022

- Created a JupyterLab Notebooks extension with React to integrate Vertex AI Pipelines
- Led design and implementation of UI support to create and interact with pipelines, simplifying workflow and minimizing boilerplate
- Maintained UX design and code consistency with existing JupyterLabs extensions, refactoring shared functionality and tests
- Researched potential methods for pipeline visualization, exploring open source alternatives and documenting limitations

COMPUTER SCIENCE SUMMER INSTITUTE

July 2021 - Aug 2021

- Extended and presented 15 daily projects and capstone with JavaScript/Firebase, mentored by Google engineers in advanced track

### Scout AI (backed by Y Combinator)

Mountain View, CA

SOFTWARE ENGINEER INTERN

May 2021 - Aug 2022

- Designed and built live restaurant-facing promotion iOS app with Swift/Firebase, created demos for pitch deck
- Set up database to sync with consumer app, emulated and deployed Node.js Cloud Functions for notifications and data cleaning
- Brainstormed and implemented business strategies based on restaurant feedback centered on loyalty and growth

### Slingshot

Pittsburgh, PA

SOFTWARE ENGINEER

Oct 2020 - May 2021

- Unified GitHub, Trello, and Google Apps in responsive company-wide automation portal with React and Firebase
- Led teaching and outreach events: taught a 6-week algorithms bootcamp and wrote problems for the UAE's first algorithmic codathon

MACHINE LEARNING RESEARCH INTERN

July 2020 - Oct 2020

- Researched keystroke dynamics (typing patterns) and built React Native app for non-intrusive mobile continuous verification
- Reached 89% classification accuracy with ensemble voting system tuned to sparse data, compared to 68% from baseline KNN models

## Academic Research

### Path Complexity - Lucas Bang

Claremont, CA

STUDENT RESEARCHER

Aug 2022 - Present

- Developed improved code complexity metrics, researching applications to software testing and mental effort in code comprehension

### Microfluidics and Biomaterials Lab - Steven Santana

Claremont, CA

DATA VISUALIZATION AND WEB DEVELOPMENT

Sep 2021 - Present

- Created visualizations for critical reflection on the engineering design process to promote non-linear design and diverse team culture
- Built personalized web dashboard for individual and team self-reflection, automatically integrating plots from Python and R

### Backgammon - Arthur Benjamin

Claremont, CA

SUNDEMAN RESEARCH ASSISTANT

Mar 2022 - May 2022

- Developed website for rapid iteration regression testing to create optimal, memorable backgammon strategies based on game state

## Activities

### Product Space: Product Management Fellowship

Sep 2021 - May 2022

- Participated in weekly interactive workshops and guest events, learning and developing core product management skills
- Industry Capstone: Analyzed data and designed specialized machine learning methods to recommend candidates to recruiters

### P-ai: Project P-Climate

Sep 2021 - Dec 2021

- Reconstructed historical climate information by preparing tree ring data and building recurrent neural networks robust to noise

## Projects and Awards

**Citadel - The Data Open (West Coast 2021):** 1st place paper (\$10,000 prize): NLP-driven Clickbait Detection

**Ruzzle Solver:** Designed first mobile-only Python program to automate a word finding game with OCR, graph theory, and prefix tries

**Reddit Username Generator:** Trained LSTM/GRU models on 400k usernames for text generation, integrated into React through TF.js

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

**Arduino & RasPi Self-Driving Car:** Built obstacle avoiding robot, tuned ROS models in Gazebo sim to speed up maze navigation by 37%

## Skills

**Languages:** Fluent in Python, TypeScript; Familiar with HTML, CSS, JavaScript, Swift, Java, C, C++, SQL

**Technologies:** React, React Native, Next.js, Firebase, Jest, Flask, Node.js, TensorFlow, Pandas, Selenium, Git, Linux, Latex