



DENNY CAO

Senior at Julia R. Masterman High School

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denny-cao

EXTRA-CURRICULARS

SLAM Robotics

Marketing & Fundraising Manager/Programming Lead

2019 – Present

- Lead a team of 5 to rebrand team, making a new website, and creating a new logo
- Write documentation for the team's codebase for new members
- Manage team's social media accounts
- Helped organize BuildIt First Tech Challenge workshop and parent open house to foster parent involvement
- Programmed the robot's autonomous and teleop code using Java and OpenCV to detect AprilTags
- Reached Pennsylvania State Championship in 2023

Programming Club

Co-president

2021 – Present

- Teach Python and programming concepts to peak of 30 students
- Work on projects such as an AI that plays ultimate tic-tac-toe and a GeoGuessr solver

TILT Teen Photo

2021-Present

- Learn about mediums of art including photography and printmaking
- Exhibit work at the TILT Institute for the Contemporary Image

Tutoring

2017-Present

- Tutor for students at school from middle school to high school for NHS
- Instructor for Root2Success, an organization started at Masterman to bring advanced mathematics to underserved students throughout Philadelphia
- Tutor at-risk students online through UPchieve
- Assisted Mr. Tannen tutor algebra, precalculus, and calculus

WORK EXPERIENCE

Web Developer

Philadelphia Trail Club

2022-Present

- Renovating website to be more accessible for senior citizens
- Using Salesforce to handle database

Cashier/Waiter

2020-2021

Worked at family restaurant and mother's nail salon part-time

SUMMER PROGRAMS

GRASP Lab Internship

University of Pennsylvania

2022

Researched extrinsic contact estimation with graduate student in PAL Group and DAIR Lab

MITES Semester (MOSTEC)

Massachusetts Institute of Technology

2022

- Built robotic companion and guide dog for the blind using Bluetooth to sync with an Android phone that pushes GPS and goal coordinates
- Wrote article about the future and implications of robotics, receiving Honorable Mention for Best of MOSTEC Science Writing

CBK Summer

WorkReady

2021

Created social impact website using HTML/CSS/JS to spread awareness about at-risk students

COMPETITIONS



2023 Wharton Investment Competition Semifinalist

One of 55 out of nearly 1,400 teams competing in 53 countries



2023 MathWorks Math Modeling Challenge

Created Vector Autoregression (VAR) model to predict future sales of e-bikes



6:41 Mile PR

After a year of running, I ran a sub-7 mile!

COLLEGE COURSES

University of Pennsylvania: MATH 1410: Calculus III, MATH 1700: Ideas in Mathematics, MGMT004: Work, Balance, and Inequality, FNCE0002: Essentials of Personal Finance

Community College of Philadelphia: MATH 163: Discrete Mathematics 1, MATH 263: Discrete Mathematics 2

INTERESTS

Sports: Indoor & Outdoor Track (2021 – Present), JV Ultimate Frisbee (2019 – 2021), Varsity Volleyball (2019 – 2020)

Music: Piano, Orchestra (Violin II 2017 – 2022)

Hobbies: Programming, Videography and Photography