

Stephen Tsai

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Education

Virginia Polytechnic Institute and State University - Blacksburg, VA.

B.S, Computer Science | GPA: 3.78

Relevant Coursework: Linear Algebra | CS 2064 (Python) | Foundations of Engineering | Cyber Cisco |

Experience

Alarm.com - Tysons, VA.

June 2022 - August 2022

Facilities / IT Intern

- Worked with the administration and IT team to maintain and facilitate smooth operations
- Distributed and installed hardware
- Shadowed software engineers
- Active within Alarm.com community, attended brown bag talks and intern seminars.

Experimental Chinese School - Jiaxian District, Taiwan

December 2021 - August 2022

Teacher / Educator

- Joined a team of 3 student teachers to teach English to grade school students in Taiwan. Students learned basic conversations and how to read/write

Projects

ARM (Automated Recyclable Management) - [Article](#) / [Abstract](#)

March 2023

- 2x Grand Prize Winner, achieving The Regeneron ISEF Finalist Medal given to 1,800 students in 75 countries.
 - First Place at the Fairfax County Regional Science and Engineering Fair
 - First Place at the Virginia State Science Fair
 - Special Award Winner for the Fairfax Clean Council
- ARM is a synthesis object detection network and hardware prototype designed to automate the process of recyclable waste classification using deep learning.

EyeSpy - [GitHub](#)

March 2023

- The system utilizes a camera to monitor a driver's face and detect if their eyes are closed for an extended period of time. If the driver's eyes are closed, EyeSpy will emit an alert sound.

ShooterStopper - [GitHub](#)

June 2022

- ShooterStopper is a winning project for OneHackII that promotes school safety with artificial intelligence to inform schools when a weapon is detected by a camera.
- Using a camera input, Shooterstopper uses an **EfficientDet** network for object detection then is compared to how similar an object is to a weapon.

TrueVision - [GitHub](#)

April 2022

- Developed a program that takes user input of an image and returns a modified variation of the picture in order to appease the eye of different color blindness.

JackBlack - [GitHub](#)

June 2022

- Final project for school. I applied my creation of a card game with Java.
- Users get experience of a casino as they play against a dealer and are dealt random cards.

Involvements

ISEF '23

Skills

Python | Java | Machine Learning | Data Science | Communication / Teamwork