

# ANTHONY ZHAI

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## EDUCATION

### Montgomery High School

GPA: 100.29

Skillman, NJ

Sep 2019 - Jun 2023

Activities: Computer Science Club (Board Member), Science Olympiad (Captain), Blue Moon Music  
Tutoring, TEAMS (Tests of Engineering Aptitude, Mathematics, and Science), Chamber Orchestra

## EXPERIENCE

### Princeton University

Machine Learning Research Intern

Princeton, NJ

Jun 2022 - Aug 2022

- Used deep learning to model power magnetic core loss with PyTorch, Tensorflow, Pandas, and Numpy.

### The Writing Institute of Princeton

Software Developer Intern

Princeton, NJ

Jun 2021 - Aug 2021

- Developed code for automating the collection of books and their metadata, using Python and Selenium.

### Tutor Trac

Class Director, Tutor

Jul 2021 - Present

- Responsible for organizing a team of tutors, planning lessons, and instructing middle-school students for math, science, and language curricula. Helped raise \$6000+ towards COVID relief.

## SKILLS

Programming Languages: Python, Dart, Javascript, HTML / CSS, C++

## RELEVANT COURSEWORK

### Neural Networks and Deep Learning, Structuring Machine Learning Projects, Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization

DeepLearning.AI (with credentials)

### Machine Learning

Stanford University (Coursera)

### Single-Variable Calculus, Multivariable Calculus, Linear Algebra

MIT OpenCourseWare

### AP Chemistry, AP Biology, AP Calculus BC, Honors Physics

Montgomery High School

## PROJECTS

### CGBNet: A Deep Learning Framework for Compost Classification Python, Tensorflow, Keras, Computer Vision, Deep Learning, Transfer Learning

CGBNet is a framework for classifying compost, one of the most important steps in automating composting. Co-first authored research article for CGBNet that was published in IEEE Access, an IEEE journal with a 3.48 impact factor and 30% acceptance rate.

### ConnectAnon Flutter, Firebase, Figma, Cloud Firestore

Connect Anonymous is a project to help teenagers connect with others from the same high school through anonymous chatting and texting. Developed the mobile app using Flutter and Firebase.

### Visionary Python, Django, Django-Rest-Framework, Flutter, Dart, Tensorflow, Keras, NLP

Visionary is an app that helps the visually impaired interact with the world through text OCR, object detection, and image captioning through Natural Language Processing and computer vision.

## AWARDS

### NASA Earth System Science Award

Nokia Bell Labs North Jersey Regional Science Fair

1 of 2 recipients for NASA Earth System Science Award, awarded to projects which incorporate studies of different spheres of the Earth system for sustainable development. Sponsored by NASA.

Mar 2022

### Overall 2nd Place

HealthHacks (PennApps x Wharton Undergraduate Healthcare Club)

Created Retro, an industry-changing application that provides valuable information to first responders in the case of emergency and decentralizes the storage of medical records.

Mar 2022

### Tests of Engineering Aptitude, Mathematics, and Science

Technology Student Association

Placed 1st in the state and 1st nationally in the TEAMS competition (based on cumulative score). Apr 2020