

# 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**

Princeton, NJ

*Machine Learning Research Intern*

Jun 2022 - Aug 2022

- Used deep learning to model power magnetic core loss with PyTorch, Tensorflow, Pandas, and Numpy as one of less than 40 participants selected in the Laboratory Learning Program.

**The Writing Institute of Princeton**

Princeton, NJ

*Software Developer Intern*

Jun 2021 - Aug 2021

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

**Montgomery Computer Science Club**

*Board Member, Executive Organizer*

Jul 2021 - Present

- Mentored students in weekly workshops and hosted national competitions. Organized school's first ever hybrid hackathon, MontyHacks, with over 180 participants from over 60 schools across the world.

## SKILLS

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

## 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 Physics C, AP Chemistry, AP Biology, AP Calculus BC**

*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