Sandra Tang

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EDUCATION

Cornell University College of Engineering | Class of 2027 | Ithaca, NY **Present**

- **Major:** Computer Science

Winchester High School | Class of 2024 | Winchester, MA **June 2024**

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TECHNICAL SKILLS

Programming Skills: Java, Python, SQL, mySQL, HTML, JavaScript, CSS, Git, Flask, React, Node.js, Docker, Rust, PyTorch, HuggingFace, AWS, Google Cloud Platform, APIs, Web Development, TensorFlow, NumPy, Pandas, Scikit-learn, OpenCV, Machine Learning, Neural Networks

RELEVANT EXPERIENCE

Imaging Systems Subteam Member | Cornell Unmanned Air Systems Project Team February 2025 - Present

- Use **Rust**, **Python**, and **Java** to develop **embedded systems** for aerial image capture and telemetry pairing, and support **ground and cloud servers** for real-time data transfer. Contribute to a frontend interface for displaying mission data and imagery.

Software Subteam Member | Engineering World Health Project Team November 2024 - Present

- Contributed to projects that implements health solutions for underprivileged communities such as the Curriculum Website which uses a **React** + **Node.js** full stack development web-app with a database created with JSON files

Mentor | Einstein's Workshop | Burlington, MA June 2024 - August 2024

- Co-taught classes such as Intro to Java, 3D Printing Design, LEGO Robotics, Computer Art, for students ages 7-16

PERSONAL PROJECTS

StudyCentral App | AppDev Hack Challenge **December 2024**

- Implemented backend logic to automate resource categorization and improve workflow efficiency using **Flask** and **Docker**.
- Built the backend using **Flask** & containerized it using **Docker**--then deployed it on a Google Cloud server

Handwriting Recognition Web App | Tufts University **July 2023**

- Developed an end-to-end handwriting recognition system with a dynamic **Javascript-based** front-end and a classification model backend using **Flask** that takes in handwritten images and converts it to text.

Video Classification Model | Sensorium **June-August 2023**

- Fine-tuned a Video Vision Transformer (ViViT) using **PyTorch** and **HuggingFace** Transformers to predict murine neuronal activity from video stimuli; implemented custom data loaders, optimized training pipelines, and evaluated model performance using **NumPy, Pandas,** and **Matplotlib.**
- Published it to Sensorium Competition 2023

LEADERSHIP EXPERIENCE

Website Manager | Red & Black Newspaper | Winchester High School September 2023 - Present

- Managed website for school newspaper monthly, learned to use **Microsoft Azure Domain** and **SQL**, organized and formatted over 18 articles/month.

Officer | Computer Science Club | Winchester High School September 2023 - Present

- Organized and led CS classes in **Java**/**Python**/**Git**, participated in regional competitions, mentored middle schoolers.

Officer | Artificial Intelligence Club | Winchester High School September 2022 - Present

- Led team to regional competitions such as **Battlecode MIT**, and taught several AI classes using **Google Colabs.**