

Tate Rowney

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EDUCATION

Carnegie Mellon University (2028)

- Intended Major: Bachelor of Science in Mathematics
- Intended Additional Major in Artificial Intelligence

The Bay School of San Francisco (2024)

- Finalist, National Merit Scholarship

EXPERIENCE

Computer Vision Researcher (2023-2024)

- Invented and implemented a novel machine learning-based approach to recognize handwritten mathematical expressions using TensorFlow
- collaborated with a Data Science researcher and professor to publish results

IT Support Assistant (Summers, 2021-2023)

- Diagnosed and repaired malfunctioning office technology
- Simplified various tasks through scripting and automation

PROJECTS

Language Model (in progress)

- Currently developing a Transformer-based NLP model using PyTorch to generate realistic text
- Creating reusable code to scrape and process large quantities of complex data
- Designing a scalable model based on available computing resources

GUI Framework for Python

- Devised a framework to turn Python scripts into compact HTML-based desktop apps
- Allows for graphical control and visualization of Python programs, while keeping boilerplate code to a minimum

Fractal Renderer

- Created a program to render chaotic mathematical functions at high precision in an aesthetically pleasing way

LEADERSHIP

Captain, Varsity Track Team (2024)

- The Bay School of San Francisco

Co-Leader, Bay School Math Club (2022-2024)

- The Bay School of San Francisco

ACTIVITIES

- Member, CMU Math Club
- Member, CMU Data Science Club
- Member, Carnegie AI Safety Initiative

SKILLS

- **Programming languages:** Python, Javascript, HTML/CSS, Arduino; some proficiency in Java, Matlab
- **Frameworks and Libraries:** TensorFlow, PyTorch, Numpy, Matplotlib, Flask, SocketIO, Bash
- **Other skills:** Google Suite (including Google scripting language); some fluency in Mandarin