Andy Yilin Tang

(+1) 217-377-3508 ★ andyyt2@stanford.edu ★ andyta.ng ★ github.com/thewindsofwinter ★ linkedin.com/in/andyytang

EDUCATION

Stanford University

September 2022 – June 2026

B.S. in Computer Science

Stanford, CA

- **GPA:** 4.0
- **Relevant Coursework:** Modern Mathematics: Continuous Methods, Computer Organization and Systems, Introduction to Probability Theory, The Modern Algorithmic Toolbox, Machine Learning, Computer Vision
- Involvement: TreeHacks Organizer, Robotics Club President, Stanford Debate Society, Stanford Birdwatching Club

Illinois Mathematics and Science Academy

August 2019 – June 2022

High School Diploma

Champaign, IL

- **GPA:** 4.0
- Relevant Coursework: Advanced Programming, Computational Science, Machine Learning

TECHNICAL SKILLS

- Languages/Frameworks: Java, C++, Go, Python, JavaScript (Node, React, Next, Express, Tailwind), HTML/CSS
- Machine Learning: Jupyter Notebooks, PyTorch, useful Python utilities (matplotlib, pandas, numpy, etc.)
- Tools: Git, Linux, Bash, Docker, Google Cloud Platform, LaTeX, Vercel, Notion, Figma, Wireshark

WORK & RESEARCH EXPERIENCE

Replit (ongoing)

June 2023 – Present

Software Engineering Intern

Cloudflare June 2022 – August 2022

Software Engineering Intern

Champaign, IL

- Benchmarked and optimized performance of **customer-facing** API using **Go**, reducing latency by **96%**.
- Implemented Magic User Role to eliminate more than two hundred excess permissions for network engineers

Fermilab April 2020 – June 2022

Student Researcher

Batavia, IL

- Developed customized scripts in C++ and Python to generate and process over two million particle collision events.
- Presented dark photon search results at the **American Physical Society** (April Meeting: Quarks to Cosmos).

University of Illinois Chung Lab

July 2019 – December 2021

Student Researcher

Champaign, IL

- Created algorithm in **Java** to automate brain damage analysis, accelerating data analysis by **one week per dataset**.
- Coauthored research paper describing epileptic encephalopathy in mouse model, in PNAS 118(51) on Dec. 15, 2021.

PERSONAL PROJECTS

Solar Flare Prediction Model (CS 231N)

April 2023 - Present

Developer

Stanford, CA

- Aggregated 350,000 magnetograms covering one solar cycle of data, as well as a decade of magnetogram data.
- Applied **3D CNNs** and **Vision Transformers** to predict X-ray flux based on time-series magnetogram images.
- 3D ViT achieved mean squared error of **0.23** on log X-ray flux, significantly less than the **1.04** of our base CNN.

Junior High Math Contest

January 2020 - August 2022

Contest Chair and Tech Lead

Aurora, IL

- Developed contest web platform from scratch using Express, Bootstrap, and EJS templates on Google Cloud.
- Coordinated eight-person team to run day-long in-person (2020, 2022) and virtual (2021, 2022) contests, involving a total of more than **700** students from across four states as well as dozens of volunteers.

SELECTED HONORS & AWARDS

USA Computing Olympiad Gold, top 150 at USA Physics Olympiad and US National Chemistry Olympiad