

EDUCATION

Massachusetts Institute of Technology	Cambridge, MA
Ph.D. in Computer Science, advised by Nir Shavit	2021 – Present
M.Eng. in Computer Science, advised by Gregory W. Wornell, GPA: 5.0/5.0	2020 – 2021
B.Sc. Double Major in Computer Science and Math, GPA: 4.9/5.0	2016 – 2020
<ul style="list-style-type: none">– <i>Master's thesis</i>: Adversarial Examples in Simpler Settings.– <i>Selected CS coursework</i>: Machine Learning, Inference and Information, Robotic Manipulation, Formal Reasoning about Programs, Compilers, Performance Engineering, Randomized Algorithms, Quantum Computation.– <i>Selected math coursework</i>: Measure Theoretic Probability, Complex Analysis, Functional Analysis, Differential Geometry, General Relativity, Abstract Algebra,	

PUBLICATIONS

1. **Tony T Wang***, Adam Gleave*, Tom Tseng, Kellin Pelrine, Nora Belrose, Joseph Miller, Michael D Dennis, Kellin Pelrine, Yawen Duan, Viktor Pogrebniak, Sergey Levine, Stuart Russell. "[Adversarial Policies Beat Superhuman Go AIs](#)". *ICML*, 2023.
2. **Tony T Wang**, Igor Zablatchi, Nir Shavit, Jonathan Rosenfeld. "[Cliff-Learning](#)". Preprint, 2023.
3. Yuheng Bu, **Tony T Wang**, Gregory W. Wornell. "[SDP Methods for Sensitivity-Constrained Privacy Funnel and Information Bottleneck Problems](#)". *ISIT*, 2021.

WORK AND RESEARCH EXPERIENCE

Computational Connectomics Group, MIT	Cambridge, MA
Research Assistant	Fall 2021 – Present
<ul style="list-style-type: none">– Working on AI safety and connectomics. I am trying to understand the computational mechanisms of both artificial and biological neural networks.	
Genesis Therapeutics	Burlingame, CA
AI Engineer Intern	Summer 2021
<ul style="list-style-type: none">– Worked to understand the behavior and improve the capabilities of deep neural networks for molecular property prediction.	
Signals, Information, and Algorithms Laboratory, MIT	Cambridge, MA
ML Researcher (M.Eng.)	Summer 2020 – Spring 2021
<ul style="list-style-type: none">– Studied toy examples of adversarial examples to unify different aspects of the phenomenon.– Collaborated with researchers at the Poggio Lab on neurosymbolic algorithms for solving the Abstraction and Reasoning Corpus.	
Nvidia	Santa Clara, CA
AI-Infra Research Intern	Summer 2019
<ul style="list-style-type: none">– Researched active learning for self-driving, with a focus on diversity-aware batch-mode sampling.	

- Implemented and evaluated algorithms to promote batch diversity at scale (across hundreds of thousands of hi-res images).
- Developed t-SNE based visualization tools for batch sampling at scale.

Five Rings Capital

New York City, NY

Quant Research Intern

Q1 2019

- Analyzed market data for statistical arbitrage opportunities.

Madry Lab, MIT

Cambridge, MA

ML Researcher (B.Sc.)

2018

- Explored alternative distance metrics for adversarial examples for deep vision networks.
- Demonstrated empirically that projected-gradient descent attacks generalize to metrics like SSIM and VGG-embedding similarity.

Dropbox

San Francisco, CA

Network Reliability Engineering Intern

Summer 2018

- Automated traffic draining for production routers.
- Added primitives to NRE's distributed task scheduler.
- Hacked on [mypyc](#), a compiler from typed Python to Python C extensions.

DigitalWoven

San Mateo, CA

Software Engineering Intern

Summer 2017

- Built on AWS the serverless backend for [UTStamp](#), a blockchain notary service.
- Developed a distributed load-testing tool to stress-test services.
- Designed and implemented the UTStamp frontend in React.

AWARDS

Eric and Wendy Schmidt Center PhD Fellowship	2022 - 2023
MIT EECS Harold Hazen Teaching Award	2021
Undergraduate Teaching Assistant Award	2020
6.035 Compiler Competition winning team	2018
USA Computing Olympiad finalist (national top 24)	2013 , 2015

OTHER PROJECTS

Roots of Random Polynomials

Fall 2019

Term project for 18.821, Project Lab in Mathematics

- Proved roots of high-degree polynomials are roughly uniformly distributed over the unit circle in \mathbb{C} .
- Report: web.mit.edu/twang6/public/poly-roots.pdf

Statistical Inference Through the Lens of Information Geometry

Spring 2019

Term paper for 18.424, Seminar in Information Theory

- Contains a proof of the Cramér-Rao bound via information geometry.
- Report: web.mit.edu/twang6/public/stats-info-geo.pdf

Voice Identification on the VoxCeleb Dataset

Fall 2017

Term project for 6.867, Machine Learning

- Compared RNNs to CNNs for performing speaker identification.
- Report: web.mit.edu/twang6/public/rnn-voxceleb.pdf

Codeforces Round #336

Q4 2015

Competitive programming contest

- Main organizer and problem writer.
- Drew 3000+ participants.
- Particularly proud of authoring codeforces.com/contest/607/problem/C.

OTHER ACTIVITIES

MIT AI Alignment

2022 – Present

Member, Advisor

MIT Club Tennis

2022 – Present

Member

MIT Anime Club

2016 – 2021

Member, President, Webmaster

MIT Chamber Music Society

2016 – 2020

Violinist

Peninsula Youth Orchestra

2011 – 2016

Violinist, Assistant Concertmaster