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EDUCATION

PhD Candidate | ***Computer Science and Engineering*** — Fall 2021 – Present
University of Michigan - Ann Arbor

Bachelor of Science | ***Major: Computer Science*** — Fall 2017 – Winter 2020
University of Wisconsin - Madison

RESEARCH INTERESTS

Thesis: Augmenting Privacy and Autonomy with Artificial Intelligence
Security and Privacy (S&P): Usable Privacy, Web Privacy, Face Recognition Privacy, Social Privacy, Mobile Privacy
Machine Learning (ML): Adversarial ML, Computer Vision, Natural Language Processing, ML Fairness
Human-Computer Interaction (HCI): Usable Privacy, Human-Robot Interaction, Digital Safety, AI Ethics

SKILLS

Programming: Python (Expert), C++ (Proficient), JavaScript (Familiar), SQL (Proficient), HTML (Familiar)
Software Development: GitHub, Perforce, Qt, NginX, Flask, Squish, AWS, Redis
Machine Learning: TensorFlow, PyTorch, Pandas, NumPy, D3.js
Languages: English (Native), Chinese Mandarin (Spoken-Only), Japanese (Elementary), French (Elementary)
Hobbies & Interests: Reading, Investing, Gaming, Anime, Skateboarding, Meditation

WORK EXPERIENCE

Graduate Research Assistant — Fall 2021 – Present
University of Michigan
- Researching usable ML tools to protect user privacy, analyze online privacy, and regulate data collection/sharing.

Research Intern — Spring 2021 – Fall 2021
University of Wisconsin - Madison
- Researched fairness properties of face recognition and created privacy controller for social robots.

Undergraduate Research Assistant — Fall 2018 – Spring 2021
University of Wisconsin - Madison
- Researched security, privacy, and fairness properties of ML systems (face recognition, image recognition, and NLP).

Software Engineering Intern — Summer 2019
Roblox Corporation
- Created core features for Roblox Studio's script editor in a test-driven development setting.

Software Engineering Intern — Summer 2018
Optum, UHG
- Designed and developed data visualization application aggregating 50+ million records from security databases.

PUBLICATIONS

[1] **Brian Tang**, Duc Bui, and Kang G. Shin. "Detection and Analysis of Cookie Violations". In: *To Be Submitted: 33rd USENIX Security Symposium*. 2024.

[2] **Brian Tang** and Kang G. Shin. "Steward: Natural Language Web Automation for Security & Privacy Analyses". In: *To Be Submitted: 45th IEEE Symposium on Security and Privacy*. 2024.

[3] **Brian Tang** and Kang G. Shin. "Eye-Shield: Real-Time Protection of Mobile Device Screen Information from Shoulder Surfing". In: *32nd USENIX Security Symposium*. 2023. URL: https://rtcl.eecs.umich.edu/rtclweb/assets/publications/2023/usenix23-tang.pdf.

[4] Duc Bui, **Brian Tang**, and Kang G. Shin. "Detection of Inconsistencies in Privacy Practices of Browser Extensions". In: *44th IEEE Symposium on Security and Privacy*. 2023. URL: https://www.bjaytang.com/pdfs/ExtPrivA.pdf.

[5] Harrison Rosenberg, **Brian Tang**, Kassem Fawaz, and Somesh Jha. "Fairness Properties of Face Recognition and Obfuscation Systems". In: *32nd USENIX Security Symposium*. 2023. URL: https://arxiv.org/abs/2108.02707.

[6] **Brian Tang**, Dakota Sullivan, Bengisu Cagiltay, Varun Chandrasekaran, Kassem Fawaz, and Bilge Mutlu. "Confidant: A Privacy Controller for Social Robots". In: *17th ACM/IEEE International Conference on Human-Robot Interaction*. 2022. URL: https://arxiv.org/abs/2201.02712.

[7] Duc Bui, **Brian Tang**, and Kang G. Shin. "Do Opt-Outs Really Opt Me Out". In: *29th ACM Conference on Computer and Communications Security*. 2022. URL: https://dl.acm.org/doi/10.1145/3548606.3560574.

[8] Varun Chandrasekaran, Chuhan Gao, **Brian Tang**, Kassem Fawaz, Somesh Jha, and Suman Banerjee. "Face-Off: Adversarial Face Obfuscation". In: *21st Privacy Enhancing Technologies Symposium*. 2021. URL: https://arxiv.org/abs/2003.08861.

[9] Varun Chandrasekaran, **Brian Tang**, Nicolas Papernot, Kassem Fawaz, Somesh Jha, and Xi Wu. "Rearchitecting Classification Frameworks For Increased Robustness". In: (2020). arXiv: 1905.10900. URL: https://arxiv.org/abs/1905.10900.

Presentations and Talks

Eye-Shield: Real-Time Protection of Mobile Device Screen Information from Shoulder Surfing[3] — Aug 2023
Anaheim, CA | *USENIX Security Symposium*

Confidant: A Privacy Controller for Social Robots[6] — Mar 2022
The Internet | *ACM/IEEE International Conference on Human-Robot Interaction*

Face-Off: Adversarial Face Obfuscation[8] — Jan 2021
The Internet | *VMWare - NSF: Data Privacy and Edge Computing*

Face-Off: Adversarial Face Obfuscation[8] — July 2021
The Internet | *Proceedings on Privacy Enhancing Technologies Symposium*

Honors and Awards

College of Engineering Fellowship — Fall 2021
University of Michigan 1st year PhD fellowship

(Selected Abstract) Qualcomm Innovation Fellowship — Spring 2021
Selected abstract on autonomous vehicle domain adaptation

CVS Health Foundation Program — Fall 2017
Scholarship for outstanding children of CVS employees

Service

NeurIPS — Summer 2022
External/Sub Reviewer – aided PC member with a paper review

PoPETS — Spring 2021
External/Sub Reviewer – aided PC member with a paper review

USENIX Security — Spring 2020
External/Sub Reviewer – aided PC member with a paper review

Patents

Real-Time Protection For Mobile Devices From Shoulder Surfing — Spring 2023
U.S. Pat. App. No. 63/468,650-Conf. #8672 — Filed

Grant Proposal Experience

Securing Interactions between Driver and Vehicle Using Batteries — Summer 2023
National Science Foundation (NSF) Cloud Credits (Cloudbank) — Granted, $16k

Securing Cyber-Physical System Communication and Control — Spring 2023
Defense University Research Instrumentation Program (DURIP) — In Progress, $300k

Personal Projects

Algorithmic Trading Framework Summer 2019
https://github.com/ramasrirama99/AlgoTradeFramework

Transcend UW Website Spring 2018
https://www.transcenduw.com/

Personal Website Summer 2021
https://www.bjaytang.com/