JARON MINK

Thomas M. Siebel Center for Computer Science
201 North Goodwin Avenue
Urbana, IL 61801-2302

Phone: +1 (909) 362-0734
Email: jaronmm2@illinois.edu
Web: https://jaronm.ink

RESEARCH INTERESTS

Human Factors in Security and Privacy; Responsible Machine Learning; System Security

EDUCATION

University of Illinois at Urbana-Champaign   Aug. 2019 - Present
Ph.D. in Computer Science.
Advisor: Gang Wang

University of California, Los Angeles   Sep. 2015 - Mar. 2019
B.S. in Computer Science

AWARDS AND HONORS

NSF Graduate Research Fellowship (GFRP) - *Awarded: $138,000*   Aug. 2021 - Aug. 2024
Magna Cum Laude   2019
UCLA Deans Honor List, UCLA   2019

PUBLICATIONS

Refereed Publications

- [CHI '24] **Jaron Mink**, Miranda Wei, Collins W. Munyendo, Kurt Hugenberg, Tadayoshi Kohno, Elissa M. Redmiles, Gang Wang. "It's Trying Too Hard To Look Real: Deepfake Moderation Mistakes and Identity-Based Bias".
  ACM CHI Conference on Human Factors in Computing Systems. Honolulu, HI, USA. May 2024.

- [USENIX Security '23] **Jaron Mink***, Harjot Kaur*, Juliane Schmüser*, Sascha Fahl, Yasemin Acar. ""Security is not my field, I'm a stats guy": A Qualitative Root Cause Analysis of Barriers to Adversarial Machine Learning Defenses in Industry".
  32nd USENIX Security Symposium. Anaheim, CA, USA. August 2023.
  (acceptance rate: 29%; * equal contribution) [pdf]

- [IEEE S&P '23a] **Jaron Mink**, Hadjer Benkraouda, Limin Yang, Arridhana Ciptadi, Ali Ahmadzadeh, Daniel Votipka, Gang Wang. "Everybody's Got ML, Tell Me What Else You Have: Practitioners' Perception of ML-Based Security Tools and Explanations".
  44th IEEE Symposium on Security and Privacy. San Francisco, CA, USA. May 2023.
  (acceptance rate: 17%) [pdf]

- [IEEE S&P '23b] Muhammad Adil Inam, Yinfang Chen, Noor Michael, Jason Liu, **Jaron Mink**, Sneha Gaur, Adam Bates and Wajih Ul Hassan. "SoK: History is a Vast Early Warning System: Auditing the Provenance of System Intrusions".
  44th IEEE Symposium on Security and Privacy. San Francisco, CA, USA. May 2023.
  (acceptance rate: 17%) [pdf]

- [ACSAC '22] Muhammad Adil Inam, Akul Goyal, Jason Liu, **Jaron Mink**, Noor Michael, Sneha Gaur, Adam Bates, Wajih Ul Hassan. "FAuST: Striking a Bargain between Forensic Auditing's Security and Throughput".
  38th Annual Computer Security Applications Conference. Austin, TX, USA. December 2022.
  (acceptance rate: 24.5%) [pdf]

- [USENIX Security '22] **Jaron Mink**, Licheng Luo, Natã M. Barbosa, Olivia Figueira, Yang Wang, and Gang Wang. "DeepPhish: Understanding User Trust Towards Artificially Generated Profiles in Online Social Networks".
  31st USENIX Security Symposium. Boston, MA, USA. August 2022.
  (acceptance rate: 16%) [pdf] [Spectrum News] [Futurum]

- [WWW '22] Ziyi Zhang, Shuofei Zhu, **Jaron Mink**, Aiping Xiong, Linhai Song and Gang Wang. "Beyond Bot Detection: Combating Fraudulent Online Survey Takers".
  The ACM Web Conference. Lyon, Fance. April 2022.
  (acceptance rate: 18%) [pdf]

- [CHI '22] **Jaron Mink**, Amanda Rose Yuile, Uma Pal, Adam J Aviv, and Adam Bates. "Users Can Deduce Sensitive Locations Protected by Privacy Zones on Fitness Tracking Apps".
  ACM CHI Conference on Human Factors in Computing Systems. New Orleans, LA, USA. May 2022.
  (acceptance rate: 24%) [pdf]

- [ACSAC '20] Noor Michael, **Jaron Mink**, Jason Liu, Sneha Gaur, Wajih Ul Hassan, and Adam Bates. "On the Forensic Validity of Approximated Audit Logs".
  36th Annual Computer Security Applications Conference. Austin, TX, USA. December 2020.
  (acceptance rate: 23%) [pdf]

Pre-Prints

- [Under Rev. '24b] Miranda Wei, **Jaron Mink**, Tadayoshi Kohno, Elissa M. Redmiles, Franziska Roesner. "SoK or So(L)K? On the Quantitative Study of Sociodemographic Factors and Computer Security Behaviors".
  Under Revision at USENIX Security, 2024.

EXPERIENCE

University of Washington – Visiting Researcher　　　　　　　　　　Jun. 2023 - Aug. 2023
Mentor: Tadayoshi Kohno
- [**CHI '24**] Investigated identity-based biases that occur during deepfake content moderation.
- [**Under Rev. '24b**] Investigated how security literature quantitatively analyzes and interprets demographic factors.

Human Computing Associates – Consultant　　　　　　　　　　Mar. 2022 - Mar. 2023
Consultant. Mentor: Elissa Redmiles
- Consulted with "Partnership on AI" to identify areas of shared concern and high priority in AI safety.

Max Planck Institute for Software Systems – Visiting Scholar   May. 2022 - Aug. 2022
Mentor: Elissa Redmiles
- **[CHI '24]** Investigated identity-based biases that occur during deepfake content moderation.

Max Planck Institute for Security and Privacy – Research Fellow   May. 2021 - Aug. 2021
Mentor: Yasemin Acar
- **[USENIX Security '23]** Investigated ML developers' perceptions of adversarial machine learning and barriers to defense deployment.

Viasat – Network Engineer Intern   Mar. 2019 - Aug. 2019
Mentor: Andrew J. Acalinovich
- Researched and developed a network alert algorithm and dashboard for Security Operations Center.

Novacoast – Software Developer Intern   Mar. 2017 - Mar. 2019
Mentor: Rouel Soberano, Renato Untalan
- Designed and developed application for experimental remote autism therapy with clinical therapists.
- Developed mobile application to control "FLIR" UAS thermal cameras.

POSTERS

Conference Posters
- **Jaron Mink***, Harjot Kaur*, Juliane Schmüser*, Sascha Fahl, Yasemin Acar. "Security is not my field, I'm a stats guy": A Qualitative Root Cause Analysis of Barriers to Adversarial Machine Learning Defenses in Industry. *The 32nd USENIX Security Symposium.* Anaheim, CA, USA. August 2023. (* equal contribution)

Workshop Posters
- **Jaron Mink**, Miranda Wei, Collins W. Munyendo, Kurt Hugenberg, Tadayoshi Kohno, Elissa M. Redmiles, Gang Wang. "It's Trying Too Hard To Look Real: Deepfakes Moderation Mistakes and Identity-Based Bias". *The 1st Center for Privacy and Security for Marginalized and Vulnerable Populations Workshop.* Anaheim, CA, USA. August 2023. (Co-located at USENIX)

CONFERENCE TALKS

- "Security is not my field, I'm a stats guy": A Qualitative Root Cause Analysis of Barriers to Adversarial Machine Learning Defenses in Industry. *The 32nd USENIX Security Symposium.* Anaheim, CA, USA. August 2023.

- Everybody's Got ML, Tell Me What Else You Have: Practitioners' Perception of ML-Based Security Tools and Explanations. *44th IEEE Symposium on Security and Privacy.* San Francisco, CA, USA. May 23, 2023.

- DeepPhish: Understanding User Trust Towards Artificially Generated Profiles in Online Social Network. *31st USENIX Security Symposium.* Boston, Massachusetts USA. August 11, 2022

- Users Can Deduce Sensitive Locations Protected by Privacy Zones on Fitness Tracking Apps. *ACM CHI Conference on Human Factors in Computing Systems.* New Orleans, LA, USA. May 3, 2022.

- On the Forensic Validity of Approximated Audit Logs. *6th Annual Computer Security Applications Conference.* Virtual. December 9, 2020.

INVITED TALKS

- Human Perceptions and Roles Under Emerging Machine Learning Threats. *Georgia Tech: School of Cybersecurity - Student Security Seminar.* Atlanta, GA, USA. Nov 16, 2022.

- Human Perceptions and Roles Under Emerging Machine Learning Threats. *CISPA.* Hannover, Germany. Jul 28, 2022.

- Human Perceptions and Roles During Emerging Machine Learning Threats. *Cyber Security in the Age of Large-Scale Adversaries (CASA) Colloquium.* Bochum, Germany. July 6, 2022.

- DeepPhish: Understanding User Trust Towards Artificially Generated Profiles in Online Social Network. *Capital Area Colloquium on Trustworthy and Usable Security/Privacy.* Washington D.C., USA. May 31, 2022.

CODE AND DATASET RELEASE

- ""Security is not my field, I'm a stats guy": A Qualitative Root Cause Analysis of Barriers to Adversarial Machine Learning Defenses in Industry".
  https://osf.io/3q54p/

- "FAuST: Striking a Bargain between Forensic Auditing's Security and Throughput".
  https://bitbucket.org/sts-lab/faust

- "DeepPhish: Understanding User Trust Towards Artificially Generated Profiles in Online Social Network".
  https://github.com/JaronMink/DeepPhish

- "Users Can Deduce Sensitive Locations Protected by Privacy Zones on Fitness Tracking Apps".
  https://bitbucket.org/sts-lab/epz-game-chi22/

TEACHING

Guest Lecturer: *CS 463. Computer Security II: Deepfakes - Threats and Mitigations.* UIUC	Fall 2021
Teaching Assistant: *CS 463. Computer Security II.* UIUC	Spring 2021
Learning Assistant: *CS 33. Intro to Computer Architecture.* UCLA	Fall 2018

ADVISING

Ezra Goodwin. B.S.: Univ. of Illinois at Urbana-Champaign	Sept. 2023 – Present

- UIUC: CS Student Ambassadors/Research Scholars (CS STARS)

Uma Pal. B.S.: Univ. of Illinois at Urbana-Champaign → PhD: UMass	Aug. 2020 – May. 2021

- UIUC: Undergraduate research collaboration
- Published as [**CHI '22**]

Olivia Figueira. B.S.: Santa Clara Univ. → PhD: UC Irvine   Jun. 2020 – Sept. 2020
- Computing Research Association-Widening Participation: DREU
- Published as [**USENIX Security '22**]

Tooba Hashmi. B.S.: Univ. of Houston-Downtown → MS: Univ. of Houston   May. 2020 - Aug. 2020
- DHS: Summer Research Team for Minority Serving Institutions Program

PROFESSIONAL SERVICE

Program Committee
- [SaTML] IEEE Conference on Secure and Trustworthy Machine Learning   2023

- [EAAMO] ACM Conference on Equity and Access in Algorithms,   2023
  Mechanisms, and Optimization

Poster Session Program Committee
- [SOUPS] Symposium on Usable Privacy and Security   2022, 2023

External Reviewer   2021, 2022, 2023, 2024
- [CHI] ACM Conference on Human Factors in Computing Systems

- [NDSS] Network and Distributed System Security Symposium   2021

- [SOUPS] Symposium on Usable Privacy and Security   2021

- [RAID] International Symposium on Research in Attacks, Intrusions, and   2022
  Defenses

- [TDSC] IEEE Transactions on Dependable and Secure Computing   2023

COMMUNITY SERVICE

SAIL: Cybersecurity Ninja Training Course, UIUC   Apr. 2021, 2022, 2023
- Designed and ran an interactive presentation to teach high school students
  about real-world security issues and how to protect themselves.

Safer Illinois: Security Verification Team, UIUC   Aug. 2020 - Dec. 2020
- Investigated security of UIUC's COVID contact tracing app.
- Disclosed findings and provided recommendations to developers.

MEDIA COVERAGE

- Scammers' threaten quality of research survey data, Spectrum News   Aug. 2023
  https://www.spectrumnews.org/news/scammers-threaten-quality-of-research-survey-data

- Can you trust what you see online?, Futurum   May. 2023
  https://futurumcareers.com/can-you-trust-what-you-see-online

- How Private is Your Health Tracking App Data?, The 21st Show   Aug. 2022
  https://will.illinois.edu/21stshow/story/how-private-is-your-health-tracking-app-data

- People are bad at spotting fake LinkedIn profiles generated by AI, New Scientist
  https://www.newscientist.com/article/2308977-people-are-bad-at-spotting-fake-linkedin-profiles-generated-by-ai/   Feb. 2022

- Four Illinois CS Students Earn Highly Coveted NSF Graduate Research Fellowship
  https://cs.illinois.edu/news/2021-NSF-Grad-Research-Fellowships   Jul. 2021

- Autism Therapy in the Palm of Your Hand   Aug. 2020
  https://news.ucsb.edu/2020/019985/autism-therapy-palm-your-hand