

JARON MINK

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RESEARCH INTERESTS

Human Factors in Security and Privacy; Trustworthy 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

- [USENIX Sec. 2023] **Jaron Mink***, Harjot Kaur*, Juliane Schmäuser*, 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 SP 2023a] **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 SP 2023b] 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 2022] 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 Sec. 2022] **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](#)] [[New Scientist](#)] [[Futurum](#)]
- [WWW 2022] 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, France. April 2022.
(acceptance rate: 18%) [[pdf](#)] [[The Transmitter](#)]
- [CHI 2022] **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](#)] [[The 21st Show](#)]
- [ACSAC 2020] 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

- [Revision 2024a] **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”.
Under Revision at CHI, 2024.
- [Revision 2024b] 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

- [**Revision 2024a**] Investigated identity-based biases that occur during deepfake content moderation.
- [**Revision 2024b**] Investigated how security literature quantitatively analyzes and interprets demographic factors.

Human Computing Associates – Consultant

Mar. 2022 - Mar. 2023

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
- **[Revision 2024a]** 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 Sec. 2023]** 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”. *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>

PROFESSIONAL SERVICE

Program Committee

- [SaTML] IEEE Conference on Secure and Trustworthy Machine Learning 2023
- [EAAMO] ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization 2023

Poster Session Program Committee

- [SOUPS] Symposium on Usable Privacy and Security 2022, 2023

External Reviewer

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

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

COMMUNITY SERVICE

- SAIL: Cybersecurity Ninja Training Course, UIUC Apr. 2021, 2022, 2023, 2024
- 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.

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
- Investigating emerging deepfake use and misuse cases.
 - UIUC: CS Student Ambassadors/Research Scholars (CS STARS)
- Uma Pal. B.S.: Univ. of Illinois at Urbana-Champaign → PhD: UMass Aug. 2020 – May. 2021
- [CHI 2022] Analyzed qualitative responses and elicited results.
 - UIUC: Undergraduate research collaboration
- Olivia Figueira. B.S.: Santa Clara Univ. → PhD: UC Irvine Jun. 2020 – Sept. 2020
- [USENIX Sec. 2022] Developed profile stimuli and survey infrastructure.
 - Computing Research Association-Widening Participation: DREU
- Tooba Hashmi. B.S.: Univ. of Houston-Downtown → MS: Univ. of Houston May. 2020 - Aug. 2020
- Investigated availability exploits in the routing protocol for Low Power and Lossy Networks (RPL).
 - DHS: Summer Research Team for Minority Serving Institutions Program

MEDIA COVERAGE

- Scammers' threaten quality of research survey data, The Transmitter Aug. 2023
<https://www.thetransmitter.org/ethics/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 Feb. 2022
<https://www.newscientist.com/article/2308977-people-are-bad-at-spotting-fake-linkedin-profiles-generated-by-ai/>
- Four Illinois CS Students Earn Highly Coveted NSF Graduate Research Fellowship Jul. 2021
<https://cs.illinois.edu/news/2021-NSF-Grad-Research-Fellowships>
- Autism Therapy in the Palm of Your Hand Aug. 2020
<https://news.ucsb.edu/2020/019985/autism-therapy-palm-your-hand>