Song Liao

Curriculum Vitae

Personal information

Address	School of Computing, Clemson University, Clemson, SC, 29631
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Education

2019 - Present   **Clemson University**   *Clemson, SC*
Ph.D Candidate in Computer Science
- Advisor: Long Cheng
- GPA: 4.00/4.00

2015 - 2018   **Xi'an Jiaotong University**   *Xi'an, China*
Master of Engineering in Software Engineering
- Advisor: Yuehu Liu

2011 - 2015   **Xi'an Jiaotong University**   *Xi'an, China*
Bachelor of Engineering in Software Engineering

Pulications

2023 CCS   **Song Liao**, Long Cheng, Haipeng Cai, Linke Guo and Hongxin Hu, *SkillScanner: Detecting Policy-Violating Voice Applications Through Static Analysis at the Development Phase*, ACM Conference on Computer and Communications Security (CCS), 2023, (Minor revision)

2022 Usenix Security   Jeffrey Young*, **Song Liao***, Long Cheng, Hongxin Hu and Huixing Deng, *SkillDetective: Automated Policy-Violation Detection of Voice Assistant Applications in the Wild*, In 31st USENIX Security Symposium (USENIX Security), 2022, Acceptance rate: $256/1414 = 18\%$, (Co-first author)

2021 IEEE Security & Privacy Magazine   **Song Liao**, Christin Wilson, Long Cheng, Hongxin Hu and Huixing Deng, *Problematic Privacy Policies of Voice Assistant Applications*, IEEE Security & Privacy, 19(6):66–73, 2021

2021 ICMLA   Mingqi Li, **Song Liao**, Ebuka Okpala, Max Tong, Matthew Costello, Long Cheng, Hongxin Hu, and Feng Luo, *COVID-HateBERT: a Pre-trained Language Model for COVID-19 related Hate Speech Detection*, In 2021 20th IEEE International Conference on Machine Learning and Applications (ICMLA) pages 233–238. IEEE

2021 Journal of Hate Studies   Matthew Costello, Long Cheng, Feng Luo, Hongxin Hu, **Song Liao**, Nishant Vishwamitra, Mingqi Li and Ebuka Okpala, *COVID-HateBERT: a Pre-trained Language Model for COVID-19 related Hate Speech Detection*, Journal of Hate Studies, 17(1), 108–118.

2020 ACSAC   **Song Liao***, Christin Wilson*, Long Cheng, Hongxin Hu, and Huixing Deng, *Measuring the effectiveness of privacy policies for voice assistant applications*, In Annual Computer Security Applications Conference (ACSAC), page 856–869, 2020, Acceptance rate: $70/302 = 23\%$
Distinguish Paper Award

2020 **CCS**	Long Cheng, Christin Wilson, **Song Liao**, Jeffrey Young, Daniel Dong, and Hongxin Hu., *Dangerous skills got certified: Measuring the trust-worthiness of skill certification in voice personal assistant platforms*, In Proceedings of the 2020 ACM SIGSAC Conference on Computer and Communications Security, pages 1699–1716, 2020, Acceptance rate: $121/715 = 16.9\%$

Under Review

2023 **KDD**	**Song Liao**, Ebuka Okpala, Long Cheng, Nishant Vishwamitra, Mingqi Li, Hongxin Hu, Feng Luo, Matthew Costello, *Characterizing Offensive Tweets in the Era of COVID-19*, ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2023

Poster

2022 **SecDev**	**Song Liao**, Long Cheng, *Poster: Understanding the Policy-Compliance Practices of Voice Application Developers*, IEEE Secure Development Conference (SecDev), 2022, Poster
2019 **SecDev**	Long Cheng, Ebuka Okpala, **Song Liao**, Danfeng(Daphne) Yao, *BranchCorr: Detecting Incompatible Branch Behavior by Enforcing Branch Correlation Integrity*, IEEE Secure Development Conference (SecDev), 2019, Poster

Teaching

Spring 2023	**CC 8570 Network Technologies Security**, *Graduate Teaching Assistant*
Fall 2022	**CS 6200/4200 Computer Security Principles**, *Graduate Teaching Assistant*
Summer 2022	**CS 6200/4200 Computer Security Principles**, *Graduate Teaching Assistant*
Spring 2021	**CS 6200/4200 Computer Security Principles**, *Graduate Teaching Assistant*

Paper Review

TDSC	IEEE Transactions on Dependable and Secure Computing, 2023
IJHCI	International Journal of Human-Computer Interaction, 2023
ICDCS	International Conference on Distributed Computing Systems, 2023
INFOCOM	IEEE International Conference on Computer Communications, 2021, 2022
ACSAC	Annual Computer Security Applications Conference, 2020, 2021,2022
ICPADS	IEEE International Conference on Parallel and Distributed Systems, 2022
CNS	IEEE Conference on Communications and Network Security, 2020, 2021
IPCCC	International Performance Computing and Communications Conference, 2020, 2021
GLOBECOM	IEEE Global Communications Conference 2019, 2020
iThings	IEEE International Conference on Internet of Things, 2019

Service

December 2020	Volunteer for ICMLA 2020 (help session chairs manage sessions)

Awards

January 2023	Talford Endowed Fellowship Award
October 2022	NSF Travel Award, IEEE SecDev 2022, Atlanta, GA
August 2022	Talford Endowed Fellowship Award
December 2020	Distinguish Paper, Annual Computer Security Applications Conference (ACSAC)
July 2020	Google awarded us $5,000 bug bounty for discovering vulnerabilities of Google Actions.

Media and News

July 2021	We presented our work on Policy-Violation Detection of Voice Assistant Applications at the FTC's PrivacyCon 2021.
May 2021	Google awarded us a bug bounty for reporting various policy-violating Google Actions.
August 2020	We presented our work on Trustworthiness of Skill Certification in Voice Personal Assistant Platforms at the FTC's PrivacyCon 2020.
July 2020	The Register, Washington Internet Daily, ZDNet and some others reported our work on measuring the trustworthiness of Alexa's skills certification.

Presentations

December 2020	Annual Computer Security Applications Conference (ACSAC), 2020

Skills

Languages	Python, C/C++, Latex, JavaScript
Libraries	Pandas, NumPy, Matplotlib, spaCy, NetworkX, BeautifulSoup
Tools	Git, HTML/CSS, Github, Amazon Mechanical Turk
Software	Bash, Vim, Gephi, Jupyter, Eclipse