Keyan Guo

917-374-6606 | keyanguo@buffalo.com | keyanUB.github.io

RESEARCH INTERSESTS

- Artificial Intelligence and Machine Learning (AI/ML) Security
- Online Hate, Harassment and Abuse Detection, Explanation and Mitigation
- Security and Privacy in Online Social Networks
- Autonomous Vehicle Cybersecurity

EDUCATION

University at Buffalo, SUNY Buffalo, NY
Ph.D. in Computer Science and Engineering *January 2022 – present*
- Advisor: Prof. Hongxin Hu
- GPT: 4.0/4.0

University at Buffalo, SUNY Buffalo, NY
M.S. in in Engineering Science *July 2019 – June 2021*
- Supervisor: Prof. Mingchen Gao
- GPT: 3.8/4.0

Qingdao University Qingdao, China
Bachelor of Engineering in Information Engineering *July 2014 – June 2018*
- GPT: 3.6/4.0

PROFESSIONAL PUBLICATIONS

* Nishant Vishwamitra, **Keyan Guo**, Liao Song, Jaden Mu, Zheyuan Ma, Long Cheng, Ziming Zhao, Hongxin Hu. "Understanding and Analyzing COVID-19-related Online Hate Propagation Through Hateful Memes Shared on Twitter". Accepted by IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2023

* Ebuka Okpala, Nishant Vishwamitra, **Keyan Guo**, Liao Song, Long Cheng, Hongxin Hu, Yongkai Wu, Xiaohong Yuan, Jeannette Wade and Sajad Khorsandroo. "AI-Cybersecurity Education Through Designing AI-based Cyberharassment Detection Lab". Accepted by IEEE Frontiers in Education Conference (FIE), 2023

* Nishant Vishwamitra, **Keyan Guo**, Hongxin Hu, Ziming Zhao, Long Cheng, Feng Luo. "Understanding and Measuring Robustness of Vision and Language Multimodal Models". Accepted by International Conference on Secure Knowledge Management, 2023

* Wenbo Ding, Liao Song, **Keyan Guo**, Ziming Zhao, Hongxin Hu. "Exploring Vulnerabilities in Voice Command Skills for Connected Vehicles". Accepted by EAI International Conference on Security and Privacy in Cyber-Physical Systems and Smart Vehicles (EAI SmartSP), 2023

* **Keyan Guo**, Wentai Zhao, Jaden Mu, Nishant Vishwamitra, Ziming Zhao, Hongxin Hu. "Understanding the Generalizability of Hateful Memes Detection Models Against COVID-19-related Hateful Memes". In 21st IEEE International Conference on Machine Learning and Applications (ICMLA), 2022

* Shaik Sabiha, **Keyan Guo**, Foad Hajiaghajani, Chunming Qiao, Hongxin Hu, Ziming Zhao. "Demo: Understanding the Effects of Paint Colors on LiDAR Point Cloud Intensities". In Workshop on Automotive and Autonomous Vehicle Security (AutoSec), 2022

Teaching Experience

Graduate Teaching Assistant(TA)   Fall 2020 – Fall 2023
University at Buffalo, SUNY   *Buffalo, NY*

- Teaching assistant for the following courses
  * CSE 565: Computer Security. Fall 2023
  * CSE 460/560: Data Models and Query Languages. Spring 2023
  * CSE 460/560: Data Models and Query Languages. Fall 2022
  * CSE 460/560: Data Models and Query Languages. Spring 2022
  * CSE 460/560: Data Models and Query Languages. Fall 2021
  * CSE 460/560: Data Models and Query Languages. Spring 2021
  * CSE 368: Introduction to Artificial Intelligence. Fall 2020

- My TA responsibilities include
  * Instructor in charge of the Artificial Intelligence (AI) Security
  * Designing and grading hands-on AI security labs
  * Participating in the development of course-related learning materials
  * Answering student questions about course knowledge, assignments and projects
  * Grading assignments, quizzes, exams, and other submissions
  * Filling-in for the instructor for face-to-face course lectures

Guest Speaker   2022 – 2023
University at Buffalo, SUNY   *Buffalo, NY*

- CSE 702 Seminar: Machine Learning and Cybersecurity.
  I was invited to talk about AI-related safety issues and knowledge of adversarial machine learning (AML) in a seminar course at the University of Buffalo. Over 20 graduate students attended the seminar.

North Carolina A&T State University   *Greensboro, NC*

- GenCyber 2022/2023.
  I was invited to speak on AI-related cybersecurity challenges and cyberbullying defense. Additionally, I presented our designed cybersecurity lab at two sessions at North Carolina State A&T University in 2022 and 2023.

Acedemic Experience

Technical Program Committee

- IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2023
- Annual Computer Security Applications Conference (ACSAC) Artifacts Evaluation Committee, 2023

Conference/Journal Paper Reviewer

- IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2023
- IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCon), 2023
- IEEE International Conference on Machine Learning and Applications (ICMLA), 2022
- IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications (TPS), 2022

- Information Systems Frontiers (ISFI), 2022

Invited Talk

- Great Lakes Security Day 2023.
  I was invited to present our research work about mitigating online hate in the evolving cyber environment at Great Lakes Security Dat (GLSD) 2023 on April 21st.GLSD brings together premier practitioners, researchers, students, and funding partners in security to share the latest advances, debate roadmaps, and future directions, create new collaborations, and seek new opportunities in cybersecurity in and around Western and Upstate New York.

Honors and Awards

- CSE Best Graduate Teaching Award. University at Buffalo, SUNY, 2022

Technique Skills

Languages: C/C++, Java, Python, JavaScript/TypeScript, HTML/CSS, MySQL, NoSQL, LaTeX
Frameworks: PyTorch, Tensorflow
Tools: Git/GitHub, Vim, Jupyter, Node.js, VS Code, IntelliJ IDEA, MongoDB, Eclipse, Amazon Mechanical Turk

Libraries: Pandas, NumPy, Matplotlib, spaCy, NetworkX, BeautifulSoup