

Raveen Wijewickrama

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EDUCATION

Doctor of Philosophy in Computer Science 2024
University of Texas at San Antonio, San Antonio, USA
Dissertation: *Friend or Foe? Evaluating Sensor-Based Information Side-Channels and Covert Communication Channels on Modern Wearable Devices*
Advisor: [Murtuza Jadliwala](#)

Master of Science in Computer Science 2017
Wichita State University, Wichita, USA

Bachelor of Science in Computer Science 2015
Asia Pacific Institute of Information Technology (APIIT), Sri Lanka

APPOINTMENTS

Postdoctoral Researcher September 2024 – Present
University of Texas at San Antonio, San Antonio, USA
[ScooterLab](#); Vehicle and Sensing Systems Development Lead
Lead vehicle and sensing development for the NSF-funded ScooterLab micromobility testbed and crowd-sensing infrastructure; manage a fleet of over 30 sensor-equipped e-scooters and the project's student researchers (one PhD and one undergraduate student; previously two MS students).

Graduate Research Assistant August 2020 – August 2024
University of Texas at San Antonio, San Antonio, USA
[ScooterLab](#); Vehicle and Sensing Systems Development Lead (Part Time)
Prototyped the Raspberry Pi-based onboard sensing unit for e-scooters during the feasibility stage, supporting the \$1.9M follow-up NSF proposal.

Graduate Research Assistant August 2018 – August 2024
University of Texas at San Antonio, San Antonio, USA
[SPriTELab](#) (Part Time)
Research on wearable and mobile sensing, micromobility, security and privacy, and AI-generated content.

Engineering Intern – Research June 2022 – August 2022
Phylum Inc.
Researched JavaScript and WebAssembly obfuscation and detection over large-scale npm package datasets.

Research Assistant May 2017 – December 2017
Wichita State University, Wichita, USA
[SPriTELab](#)
Investigated motion-sensor-based handwriting inference using smartwatches.

RESEARCH INTERESTS

- Mobile and Wearable Sensing
- Urban and Micromobility Sensing
- Web Security and Privacy
- Edge and Cyber-Physical Sensing
- Human-Centered Sensing

Peer-Reviewed Conference Papers

11. A H M Nazmus Sakib, Mahsin Bin Akram, Joseph Spracklen, Sahan Kalutarage, **Raveen Wijewickrama**, Igor Bilogrevic, Murtuza Jadliwala, “To WASM or Not to WASM: Evaluation of Browser Fingerprinting Defenses Under WASM based Obfuscation”, *International Symposium on Research in Attacks, Intrusions and Defenses (RAID)*, Lancaster, United Kingdom, October 2026.
10. Aaditya Arunkumar Khant, **Raveen Wijewickrama**, Murtuza Jadliwala, “ADVISE: Adversarial Invisible Steganography for Event-data”, *IEEE European Symposium on Security and Privacy (EuroS&P)*, Lisbon, Portugal, July 2026.
9. **Raveen Wijewickrama**, Maryam Abbasihshejani, Anindya Maiti, Murtuza Jadliwala, “OverHear: Headphone based Multi-sensor Keystroke Inference”, *International Conference on Applied Cryptography and Network Security (ACNS)*, Stony Brook, New York, USA, June 2026.
8. Khoi Trinh, Scott Seidenberger, Joseph Spracklen, **Raveen Wijewickrama**, Bimal Viswanath, Murtuza Jadliwala, Anindya Maiti, “Prompt and Circumstances: Evaluating the Efficacy of Human Prompt Inference in AI-Generated Art”, *International Conference on Artificial Intelligence in Music, Sound, Art and Design (EvoMUSART)*, Toulouse, France, April 2026.
7. Aaditya Khant, **Raveen Wijewickrama**, Murtuza Jadliwala, “SAFE: Spiking Neural Network-based Audio Fidelity Evaluation”, *Asian Conference on Machine Learning (ACML)*, Taipei, Taiwan, December 2025.
6. Khoi Trinh, Scott Seidenberger, **Raveen Wijewickrama**, Murtuza Jadliwala, Anindya Maiti, “A Picture is Worth a Thousand Prompts? Efficacy of Iterative Human-Driven Prompt Refinement in Image Regeneration Tasks”, *International Joint Conference on Artificial Intelligence (IJCAI), Special Track on AI, the Arts and Creativity*, Montreal, Canada, August 2025.
5. Joseph Spracklen, **Raveen Wijewickrama**, A H M Nazmus Sakib, Anindya Maiti, Bimal Viswanath, Murtuza Jadliwala, “We Have a Package for You! A Comprehensive Analysis of Package Hallucinations by Code Generating LLMs”, *USENIX Security Symposium*, Seattle, Washington, USA, August 2025. 🏆 Distinguished Paper Award. 📈 180+ citations. 🔗 [Code and data](#).
4. Christoph Sendner, Jasper Stang, Alexandra Dmitrienko, **Raveen Wijewickrama**, Murtuza Jadliwala, “MirageFlow: A New Bandwidth Inflation Attack on Tor”, *Network & Distributed System Security Symposium (NDSS)*, San Diego, California, USA, February 2024.
3. Nisha Vinayaga-Sureshkanth, **Raveen Wijewickrama**, Anindya Maiti, Murtuza Jadliwala, “An Investigative Study on the Privacy Implications of Mobile E-scooter Rental Apps”, *ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec)*, San Antonio, Texas, USA, May 2022.
2. **Raveen Wijewickrama**, Anindya Maiti, Murtuza Jadliwala, “Write to Know: On the Feasibility of Wrist Motion based User-Authentication from Handwriting”, *ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec)*, Virtual, June 2021.
1. **Raveen Wijewickrama**, Anindya Maiti, Murtuza Jadliwala, “deWristified: Handwriting Inference Using Wrist-Based Motion Sensors Revisited”, *ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec)*, Miami, Florida, USA, May 2019.

Peer-Reviewed Journal Articles

1. **Raveen Wijewickrama***, Sameer Anis Dohadwalla*, Anindya Maiti, Murtuza Jadliwala, Sashank Narain, “SkinSense: Efficient Vibration-Based Communications Over Human Body Using Motion Sensors”, *Elsevier Internet of Things (IoT)*, 2023. (*Equal contribution.)

Peer-Reviewed Workshop Papers

3. Scott Seidenberger, Marc Beret, **Raveen Wijewickrama**, Murtuza Jadliwala, Anindya Maiti, “NinjaDoH: A Censorship-Resistant Moving Target DoH Server Using Hyperscalers and IPNS”, *Workshop on Measurements, Attacks, and Defenses for the Web (MADWeb, co-located with NDSS)*, San Diego, California, USA, February 2026.
2. Anindya Maiti, Nisha Vinayaga-Sureshkanth, Murtuza Jadliwala, **Raveen Wijewickrama**, Greg P. Griffin, “Impact of E-Scooters on Pedestrian Safety: A Field Study Using Pedestrian Crowd-Sensing”, *IEEE PerCom Workshop on Sensing Systems and Applications using Wrist Worn Smart Devices (WristSense)*, Pisa, Italy, March 2022. 📈 75+ citations.
1. Nisha Vinayaga-Sureshkanth, **Raveen Wijewickrama**, Anindya Maiti, Murtuza Jadliwala, “Security and Privacy Challenges in Upcoming Intelligent Urban Micromobility Transportation Systems”, *ACM Workshop on Automotive and Aerial Vehicle Security (AutoSec)*, Virtual, August 2020. 📈 40+ citations.

Peer-Reviewed Posters and Demos

1. Ubaidullah Khan, **Raveen Wijewickrama**, Buddhi Ashan M.K., A H M Nazmus Sakib, Khoi Trinh, Christina Duthie, Nima Najafian, Ahmer Patel, R.N. Molina, Anindya Maiti, Sushil K. Prasad, Greg P. Griffin, Murtuza Jadliwala, “ScooterLab: A Programmable and Participatory Sensing Research Testbed using Micromobility Vehicles”, *IEEE International Conference on Pervasive Computing and Communications (PerCom) Demos*, Washington, D.C., USA, March 2025.

Reports and Pre-Prints

3. Mahsin Bin Akram, A H M Nazmus Sakib, OFM Riaz Rahman Aranya, **Raveen Wijewickrama**, Kevin Desai, Murtuza Jadliwala, “ThermalTap: Passive Application Fingerprinting in VR Headsets via Thermal Side Channels”, *arXiv:2605.12927*, 2026.
2. Murtuza Jadliwala, Greg P. Griffin, Sushil K. Prasad, Anindya Maiti, Buddhi Ashan M.K., **Raveen Wijewickrama**, Khoi Trinh, A H M Nazmus Sakib, Alisha Momin, “ScooterLab Workshop 2025: Advancing Research and Collaboration using a Micromobility-supported Sensing and Research Infrastructure”, *Workshop Report*, August 2025.
1. Khoi Trinh, Joseph Spracklen, **Raveen Wijewickrama**, Bimal Viswanath, Murtuza Jadliwala, Anindya Maiti, “Promptly Yours? A Human Subject Study on Prompt Inference in AI-Generated Art”, *arXiv:2410.08406*, 2024.

TEACHING

Courses

Graduate Teaching Assistant, University of Texas at San Antonio (January – August 2023):

- **Systems Programming** – Led recitation sessions.
- **Principles of Cybersecurity**

Graduate Teaching Assistant, Wichita State University (August 2016 – December 2017):

- **Programming Paradigms; Object-Oriented Programming; Programming Language Concepts; Operating Systems; Introduction to Database Systems**

MENTORING

Supervision of Student Researchers

Current Students:

- 👤 A H M Nazmus Sakib – PhD in Computer Science, University of Texas at San Antonio.
– Joint Works: *To WASM or Not to WASM* (RAID 2026); *ThermalTap* (pre-print, 2026).
- 👤 Aaditya Khant – PhD in Computer Science, University of Texas at San Antonio.
– Joint Works: *ADVISE* (EuroS&P 2026); *SAFE* (ACML 2025).
- 👤 Mahsin Bin Akram – PhD in Computer Science, University of Texas at San Antonio.
– Joint Works: *ThermalTap* (pre-print, 2026); *To WASM or Not to WASM* (RAID 2026).
- 👤 Yeshaswini Parvatham – BS in Computer Science, University of Texas at San Antonio.

Past Students:

- 👤 Alisha Momin – MS in Artificial Intelligence, University of Texas at San Antonio (Graduated 2026).
- 👤 Christian Bargraser – BS/MS in Computer Science, University of Texas at San Antonio (Graduated 2023).
- 👤 Josh Klopfenstein – BS in Computer Science, University of Texas at San Antonio (Graduated 2022).
- 👤 Oscar Ortiz – BS in Computer Science, University of Texas at San Antonio (Graduated 2020).

SERVICE & OUTREACH ACTIVITIES

Conference Committees

- Replicability Committee Member, 15th ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), San Antonio, Texas (2022).
- Web Chair, [15th ACM Conference on Security and Privacy in Wireless and Mobile Networks \(WiSec\)](#), San Antonio, Texas (2022).

Reviewing

- International Conference on Applied Cryptography and Network Security, ACNS (2026).
- Elsevier Pervasive and Mobile Computing, PMC (2025).

Workshop and Event Organization

- Research Collaboration Co-Coordinator, [ScooterLab Workshop 2026](#), San Antonio, Texas (May 2026).
- Research Collaboration Co-Coordinator, [ScooterLab Workshop 2025](#), San Antonio, Texas (May 2025).
- Poster Session Co-Chair, [2nd NSF AI Spring School](#), University of Texas at San Antonio, San Antonio, Texas (2025).

AWARDS AND HONORS

- 🏆 USENIX Security Distinguished Paper Award, USENIX Security 2025.
- 🏆 1st Place, Graduate Category, [Los Datos Conference 2024 Poster Session](#), University of Texas at San Antonio, for “Special Delivery! Investigating the Prevalence, Causes, and Mitigation Methods of Package Hallucination in Code Generating LLMs” (with Joseph Spracklen).
- 🏆 2nd Place, Poster Session, NSF AI Spring School 2024, University of Texas at San Antonio, for “ScooterLab: A Programmable and Participatory Sensing Testbed using Micromobility Vehicles”.
- 🏆 ACM Student Travel Grant, 15th ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), 2022.
- 🏆 ACM Student Travel Grant, 12th ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), 2019.

PRESS COVERAGE OF RESEARCH

Software Supply-Chain Security (Package Hallucinations)

- “[AI Threats in Software Development Revealed in New Study](#)”, *Tech Xplore*, April 2025.
- “[AI Code Tools Widely Hallucinate Packages](#)”, *Dark Reading*, April 2025.
- “[AI Hallucinations Create ‘Slopsquatting’ Supply Chain Threat](#)”, *Infosecurity Magazine*, April 2025.
- “[AI Hallucinations Create a New Software Supply Chain Threat](#)”, *SecurityWeek*, April 2025.
- “[AI Code Helpers Just Can’t Stop Inventing Package Names](#)”, *The Register*, September 2024.

Also covered by IT Brew, I Programmer, and others.

Micromobility Sensing, Security, and Privacy

- “[UTSA Goes Wheels Down with Additions to Electric Scooter Fleet](#)”, *KSAT*, December 2024.
- “[UTSA Researchers Receive 1.7 Million Grant to Deploy Data Collecting E-Scooters](#)”, *KSAT*, 2023.
- “[How Researchers at the University of Texas at San Antonio Are Helping the Fast-Growing City Mitigate Traffic and Make Its Roads Safer](#)”, *Business Insider*, May 2021.
- “[UTSA Researchers Turning Scooters into Smart Data Collectors](#)”, *San Antonio Express-News*, 2021.
- “[The Great E-Scooter Hack](#)”, *EurekAlert!*, January 2020.