Jayati Dev

EDUCATION

Ph.D. in Security Informatics (minor. Human-Computer Interaction)

August 2017 - August 2022

Indiana University Bloomington, IN, USA

Committee: L. Jean Camp (chair), Apu Kapadia, Patrick Shih, Sameer Patil, Xiaojing Liao

Dissertation: Privacy-preserving Conversational Interfaces

Bachelor of Technology in Electronics and Communication Engineering

West Bengal University of Technology, Kolkata, India Advisory Committee: Prabir Banerjee, Soumya Chatterjee

Thesis: Analysis of Linear Antenna Array

August 2013 - June 2017

EXPERIENCE

Public Policy Researcher, Cybersecurity

November 2023 – Present June 2022 – October 2023

Privacy Engineer, Technical Research and Development

Comcast, Philadelphia, PA

- Developed novel privacy and AI threat modeling solutions for security teams.
- Lead a team of 6 people for the Post-Quantum Cryptography inventory work stream.
- Represent Comcast on various cyber policy efforts and standards in post-quantum cryptography, AI, privacy, and other cybersecurity issues across several collaborative working groups like MITRE, CTA, CSA, ISO, ATIS, NIST, M3AAWG, etc.
- Participate in strategic cyber policy initiatives by engaging with internal and external stakeholders, including federal partners like DHS, FCC, and the White House.

Consulting Intern, Privacy, Data Protection, and Compliance

June 2021 - August 2021

Crowe LLP, Chicago, IL

- Developed and documented Key Risk Indicators (KRI) at an enterprise level to align with the NIST Privacy Framework.
- Analyzed Records of Processing (RoP) and cross-border assessments for large-scale pharmaceutical and consumer goods companies for updated compliance with CCPA and GDPR.
- Developed material for privacy legislation analysis and presented findings to 500+ participants in a Community of Growth (CoG) panel for company-wide training in Colorado and Nevada privacy laws.

Research Assistant, Luddy School of Informatics, Computing, and Engineering Graduate Assistant, O'Neill School of Environmental and Public Affairs

Indiana University, Bloomington, IN

August 2019 – August 2022 June 2019 – August 2019

- Led research and supervised undergraduates in analysis of commercial bots, technical support and qualitative team member in eight week in-home implementation of privacy-by-design IoT system. Technical lead in "CyberCTF" for implementing pilot field studies for middle and high school students.
- Technical lead during research and implementation for two large-scale collaborative grants, "Internet of Things" and "Cyber CTF" to develop experiments for global phishing resilience testing and cybersecurity education for K-12 students.
- Facilitated qualitative and quantitative research through interviewing, data analysis, and survey instrument development for user perception of privacy in the Internet of Things devices.
- Conducted policy analysis and system design research for privacy-enhancing design at an organizational level for commercial bots and conversational platforms deployed globally. Conducted risk analysis and privacy assessment through qualitative user research and content analysis of interactions.
- Conducted survey development and design to measure security perception among older adults as part of the cybersecurity and privacy education initiative for older adults in the workforce.

Google Public Policy Fellow, National Security

Third Way, Washington D.C

 Conducted research on ongoing and future Congressional policy around cybersecurity and privacy that aided in the development of the Third Way Cyber Enforcement Initiative.

Conducted analysis of cybercrime reports and current privacy lawsuits to understand the focus on legislation around state and non-state actors.

Associate Instructor, Luddy School of Informatics, Computing, and Engineering Project Supervisor, Luddy School of Informatics, Computing, and Engineering

Indiana University, Bloomington, IN

Provided teaching support for over 600 students and project mentoring for 16 teams for the following courses:

- INFO-I 494: Design and Development of an Information System
- INFO-I 230: Analytics of Cybersecurity
- INFO-I 231: Mathematics of Cybersecurity

Research Intern, Cryptography

Indian Statistical Institute, Kolkata, India

• Implemented existing encryption and new authenticated encryption schemes like AES-COPA and ELmD (CAESAR competition) on Intel processors.

August 2017 – May 2019

June 2018 - August 2018

August 2017 - May 2019

June 2016 – August 2016

SKILLS

Research	Quantitative	Quantitative Surveys, experiments, longitudinal studies		
	Qualitative	Online and in-person interviews, focus groups, contextual inquiry, content analysis, thematic and discursive analysis		
	Statistical Analysis	Hypothesis testing, effect sizes, factor analysis, regression	on	
	Design	Usability testing, prototyping, participatory design, obse	ervation, case studies	
	Social Media Mining/	Latent Dirichlet Analysis (LDA), Linguistic Inquiry and W	ord Count (LIWC),	
	Machine Learning	Supervised Learning Algorithms		
Policy Analysis				
Languages	R, Python, Java, Web Dev	velopment (HTML, CSS, PHP, SQL)		
Certifications	OneTrust, Comcast AI Aca (Associate Level)	ademy, CAIDP AI Policy Clinic Certification, Graduate Teaching Apprenticeship		
MENTORSHIP				
Mentor Collectiv	<i>r</i> e		2024	
Graduate Philly Seminar on Internet Safety			2021 - 2022	
UXperience Priva	2020			
Undergraduate I	2019			
Women in Engineering, Ivy Tech Community College			2018 - 2019	
		ip Program - Shivani Sadam, Jonathan Cheng, Meera Iyer, anda King, David Hume, Shea Tuli, Ebuka Egbunam, Tessa	2017 - 2022	
AWARDS/ FELL	OWSHIPS			
Comcast Circle o	of Success Award, highest org	ranization-wide award	2025	
Comcast Cybersecurity Award			2023	
Comcast Governance, Risk, and Compliance Ace Award			2023	
Indian University Luddy Summer Research Award			2021	
Women in Cybersecurity Scholarship			2018, 2019, 2021	
Center for Women in Technology Mentor Fellowship			2018	
Google Public Policy Fellowship			2018	
SERVICE				
Leadership Role	s			
Co-chair, Emergi	2025			

Board Member, Society of Cable Telecommunications Engineers (SCTE) New England Chapter	2025
Vice-chair, Future of Cryptography Working Group, CableLabs	2024
Workshop Organizer, Emerging Tech in Communications Workshop, TPRC	2024
Ambassador, Open Source Program Office (OSPO), Comcast	2024
Workshop Chair, Workshop on Child Online Safety and Harms (COSH) at <u>EICC</u>	2023 – Present
Workshop Chair, Workshop on Kids' Online Privacy and Security (KOPS) at <u>SOUPS</u>	2022 – Present
Associate Chair, CHI Late-Breaking Works	2020 - 2023
Department Editor, ACM XRDS	2019 - 2022
Peer-Reviewing	
Program Committee Member, SDIoTSec at NDSS	2024
Program Committee Member, Workshop on Usable Security (<u>USEC</u>)	2020 - 2023
Program Committee Member, Preparing Future Faculty (PFF) Conference	2019, 2021
Reviewer, ACM Special Issue on Generative AI	2024
Reviewer, Computer Supported Cooperative Work (CSCW)	2021
Reviewer, ACM CHI Papers, Extended Abstracts, Alt.Chi	2019 - 2021
Reviewer, International Journal of Human-Computer Interaction (IJHCI)	2021, 2023, 2024
Reviewer, Computers in Human Behavior Reports	2021
Reviewer, Social Media and Society (SM&S)	2021
Reviewer, Tangible, Embedded, and Embodied Interaction (TEI)	2020
Reviewer, ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)	2020
Reviewer, International Conference on Multimodal Interaction (ICMI)	2020
Community Memberships	
WICT Network	2024 – Present
NIST Privacy Working Group	2021
ACM US Technology and Policy Committee	2021 – Present
National Center for Women Information Technology	2020 – Present
TALKS	
"Migrating Complex Ecosystems to Post-Quantum Cryptography", Executive Women's Forum (EWF) "Harnessing AI for Innovation" Panel, APAICS Legislative Leadership Summit	2025
"Getting Cable Quantum Ready", President's National Telecom Advisory Committee (NSTAC) "Getting Cable Quantum Ready", National Cable and Television Association (NCTA) "How to Threat Model the ML Dragon?", Grace Hopper Conference (GHC) "xCompass Update", SOUPS Workshop on Privacy Threat Modeling (WPTM) "Building Guardrails in AI Systems with Threat Modeling", ACM CS&Law "Building Guardrails in AI Systems with Threat Modeling", M3AAWG 60th General Meeting	2024
"How to Threat Model the ML Dragon?" Building Systematic GuardRails Against Cybersecurity Threats to	

ML Models", Grace Hopper Conference (GHC) (upcoming)

"Al Risk Management: Adopt and Scale Al Threat Detection", Executive Women's Forum (EWF) "Converging Digital Disruptors and Media Industry Security", TVNewsCheck Broadcasters' Retreat "Models of Applied Privacy", ACM CHI "Models of Applied Privacy", Carnegie Mellon University "Models of Applied Privacy", SOUPS Workshop on Privacy Threat Modeling "Putting Privacy on the MAP", DayofShecurity "Putting Privacy on the MAP", PEPR	2023
"Privacy and Respectful Discourse in Chatbots", PEPR	2022
"A Tale of Two Platforms: Understanding Privacy through Computational Social Science over Twitter and Reddit", WiCyS "Colorado Privacy Act", Community of Growth, Crowe LLP	2021
"Privacy in Chatbots", Conference on Conversational User Interfaces (CUI) "Barriers from Stopping Unwanted Emails", ACM CHI "WhatsApp Privacy in India and Saudi Arabia", USENIX Usable Privacy and Security (SOUPS)	2020
"Researching at the Margins", Center for Women in Technology, Indiana University Bloomington	2018

MEDIA

Readers' Digest. Does Unsubscribing from Emails Work—and Is It Safe to Do. 2024. https://www.rd.com/article/does-unsubscribing-from-emails-work-and-is-it-safe-to-do/

New York Times. *Email Unsubscribe Services Don't Really Work*. Follow This (Free) Advice Instead. 2023. https://www.nytimes.com/wirecutter/reviews/best-email-unsubscribe-service/

TVNewsCheck. Cybersecurity for Broadcasters Retreat. *Converging Digital Disruptors and Media Industry Security*. 2023. https://tvnewscheck.com/digital/article/cyber-experts-to-take-on-converging-digital-disruptors-and-media-industry-security/

Privado. Interview with a Privacy Engineer. 2023. https://www.linkedin.com/events/7094671030534717441/

PUBLICATIONS

Google Scholar Profile: https://scholar.google.com/citations?user=Cok5R-8AAAAJ

Policy Publications

2024 <u>Standards with Open Questions regarding PQC Adoption</u>. MITRE Post-Quantum Cryptography Coalition.

<u>Transitioning to Quantum-Safe Cryptography: Exploring the Role and Value for Developing and Implementing a Cryptographic Bill of Materials</u>. MITRE Post-Quantum Cryptography Coalition.

Al Threat Evaluation Working Group Report. DHS CISA Information and Communications Technology Supply

Chain Risk Management. [Upcoming]

Garg, V. and Dev, J. <u>AI and the Economics of Cybersecurity</u>. USENIX :login; Strategic Framework for Crypto Agility and Quantum Risk Assessment, *ATIS*.

Peer-reviewed Publications

2025 Kwong, J., Dev, J., and Garg, V. (2025). Do Black Hats Dream of Lax Policy? TPRC. September 2024.

Dev, J., Akhuseyinoglu, N., Kayas, G., Rashidi, B., and Garg, V. (2024). Building Guardrails in Al Systems with

Threat Modeling. ACM Digital Government: Research and Practice. June 2024.

Kayas, G., Evans, J., Dev, J., Rashidi, B., Garg, V. (2024). Loose Bits Sink Gits. SCTE Expo 2024.

Dev, J., Rashidi, B., Garg, V. (2023). Models of Applied Privacy (MAP): A Persona Based Approach to Threat Modeling. ACM CHI 2023.

Abbott, J., Dev, J., Kim, D., Gopavaram, S. R., Iyer, M., Sadam, S., ... & Camp, L. J. (2023). Kids, Cats, and Control: Designing Privacy and Security Dashboards for IoT Home Devices. In *Proceedings 2023 Symposium on Usable Security*. *Internet Society*.

Dev, J., & Dev, S. (2023, April). "How Can I Help You?": User Perceptions of Privacy in Retail Chat Agents. In Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems (pp. 1-6).

2022

J., Dev, J., Kim, D., Gopavaram, S., Iyer, M., Sadam, S., Mare, S., Ringenberg, T., Andalibi, V., Camp, L.J. (2022). Privacy Lessons Learnt from Deploying an IoT Ecosystem in the Home. *EuroUSEC 2022*.

2021

Andalibi, V., Dev, J., Kim, D., Lear, E., Camp, L.J. (2021). Is Visualization Enough? Evaluating the Efficacy of MUD-Visualizer in Enabling Ease of Deployment for Manufacturer Usage Description (MUD). *ACSAC 2021*. Gopavaram, S., Dev, J., Das, S., and Camp, L. J. (2021). IoT Marketplace: WillingnessTo-Pay vs. Willingness-To-Accept. *WEIS 2021*.

Andalibi, V., Dev, J., Kim, D., Lear, E., Camp, L.J. (2021). Making Access Control Easy in IoT. *HAISA* 2021.

Gopavaram, S., Dev, J., Das, S., and Camp, L. J. (2021). IoT Marketplace: WillingnessTo-Pay vs. Willingness-To-Accept. *SHB* 2021.

Gopavaram, S., Dev, J., Grobler, M., Kim, D., Das, S., and Camp, L. J. (2021). CrossNational Study on Phishing Resilience. *USEC*.

2020

Dev, J., Camp, L. J. (2020). User Engagement with Chatbots: A Discursive Psychology Approach. CUI@CHI. ACM CHI 2020.

Dev, J., Camp, L.J. (2020). User Engagement with Chatbots: A Discursive Psychology Approach. ACM CUI 2020.

Dev, J., Moriano, P., Camp, L.J. (2020). Lessons Learnt from Comparing WhatsApp Privacy Concerns Across Saudi and Indian Populations. *USENIX SOUPS* 2020.

Dev, J., Rader, E., & Patil, S. (2020). Why Johnny Can't Unsubscribe: Barriers to Stopping Unwanted Emails. ACM CHI 2020.

2019

S Das, J Dev, LJ Camp, "Privacy Preserving Policy Framework: User-Aware and User-Driven", Telecommunications Policy Research Conference (Washington, DC) 20-21 Sept. 2019. Dev, J., Das, S., Rashidi, Y., Camp, L. J. (2019). Personalized WhatsApp Privacy: Demographic and Cultural Influences on Indian and Saudi Users. SHB 2019.

2018

Das, S., Dev, J., Srinivasan, K. (2018). Modularity is the Key: A New Approach to Social Media Privacy Policies. *MexIHC* 2018.

Dev, J., Das, S., Camp, L. J. (2018). Privacy Practices, Preferences, and Compunctions: WhatsApp Users in India. *HAISA* 2018. (p. 135).

Dev, J., Das, S., Srinivasan, K. (2018). Modularity is the Key: A New Approach to Social Media Privacy Policies. 3rd Workshop on Inclusive Privacy and Security (WIPS), *SOUPS*. Das, S., Dev, J. (2018). Peeling the Onion: A Literature Review on Usability of TOR. *In InfoSocial 2018*.

2017

Sanchari Das, Andrew Dingman, Gianpaolo Russo, Jayati Dev, Olivia Kenny, & L Jean Camp, "A Qualitative Study on Usability and Acceptability of Yubico Security Key", *IEEE STAST*, 4 December 2017 (Orlando, FL) Extended version presented at Financial Cryptography 2018.

Technical Reports and Contributions

Strategic Framework for Crypto Agility and Quantum Risk Assessment, Alliance for Telecommunications
 Industry Solutions.
 S. Gopavaram, J. Dev, E. Gumusel, L.J. Camp, "Going Beyond Labels". Response to NIST Calls for Submiss

S. Gopavaram, J. Dev, E. Gumusel, L.J. Camp, "Going Beyond Labels". Response to NIST Calls for Submission to the Workshop on In Workshop and Call for Papers on Cybersecurity Labeling Programs for Consumers: Internet of Things (IoT), September 2021.

Dev, J. (2020). Discussing Privacy and Surveillance on Twitter: A Case Study of COVID19. ArXiv.

2019 Mehta, I., & Dev, J. (2019). Taking Action on Cyber Enforcement: Assessing US Legislative Progress in the 115th Congress. *Third Way Cyber Enforcement Initiative*.

Public Projects

2023 GitHub - Comcast/ProjectGuardRail: Al/ML applications have unique security threats. Project GuardRail is a set of security and privacy requirements that Al/ML applications should meet during their design phase that serve as guardrails against these threats. These requirements help scope the threats such applications must be protected against.

2022 <u>GitHub - Comcast/MAP: This repository hosts a persona based privacy threat modeling solution called</u>

Models of Applied Privacy or MAP.

2020 Cyber Learning Platform for K-12 Students.