

Tanusree Sharma

Curriculum Vitae

Informatics Department
School of Information Sciences
University of Illinois at Urbana Champaign
Champaign, IL, 61820, USA

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Website: <https://tanusreesharma.github.io/>
Twitter: [@Tanusree_Sharma](https://twitter.com/Tanusree_Sharma)

Research Interests

Usable security and Privacy, Decentralized Governance, Human-Computer Interaction, Human-Centered AI, Human Factor in Distributed Ledger Technologies, and Accessible Computing.

Education

Ph.D. Candidate in Informatics 2019- June 2024

University of Illinois at Urbana Champaign, *Champaign, IL*

Informatics Dept, School of Information Sciences

Advisor: Yang Wang

Committee: Andrew Miller, Dawn Song, Sauvik Das, Yun Huang

B.S. in Computer & Information Technology 2016

Jahangirnagar University, *Dhaka, Bangladesh*

Department of Computer & Information Technology

Employment

University of Illinois at Urbana Champaign, Graduate Research Assistant Aug 2019–Present

Project: Inclusive.AI to engage marginalized groups in AI Design (Funded by **OpenAI**)

Max Planck Institute, Research Intern May - Aug 22

Advisor: Asia J. Biega; *Lab:* Responsible Computing Group

Project: Operationalizing Data Minimization in AI System from a User-Centered Approach

Google, Privacy Engineer Intern May-Aug 21

Lab: SFDC Privacy Group

Project: Data-Driven Automated Privacy Risk Review Tooling for Data Transparency in Google Product

University of Houston, Research Assistant Sept 18 -May 19

Advisor: Albert Cheng; *Lab:* Real-Time System (RTS) Lab

Project: Real-Time Task Scheduling for Traffic Routing with a Re-enforcement Learning Approach

European Union Project, Management Information System Officer Feb 18 -July 18

Project: Digital Health Management Scheme for Developing Countries

Bangladesh ICT Ministry Project, Research Assistant July 17 -Feb 18

Project: Designing and developing a model of E-Governance Application for People Identity Verification in the Cloud by deep neural network and system architecture with REST API.

Selected Honors and Awards

Democratic inputs to AI by OpenAI - Awarded \$110,000 (PhD Dissertation Work) 2023

SIGCHI Gary Marsden Travel Grant 2023 - Awarded \$2500 2023

IC3 Blockchain Summit Student Travel Award - Awarded \$2,000 2023

Plurality Student Travel Award - Awarded \$1,500 2023

Graduate College Travel Grant-\$1000 2023

Graduate College Travel Grant 2022, UIUC, Awarded \$1250 2022

Nomination by UIUC Grad College for Google PhD Fellowship	2022
Nomination by UIUC Grad College for Apple AI/ML Ph.D. Fellowship	2022
Virtual Grace Hopper Celebration Scholarship 2021 - Awarded / Sponsored by Google \$1500	2021
CSRMP Scholar-Google's CS Research Mentorship Program	2021
Graduate College Travel Grant 2020, UIUC, Awarded \$1000	2020
Best Paper Award at the 9th International Conference on the Internet of Things	2020

Publications ([Google Scholar](#))

- [C.25] **"I'm not convinced that they don't collect more than is necessary": User-Controlled Data Minimization Design in Search Engines**
Tanusree Sharma, Lin Kyi, Yang Wang, Asia Biega
33rd USENIX Security Symposium 2024 (Accepted)
- [C.24] **"I Can't Believe It's Not Custodial!": Usable Trustless Decentralized Key Management**
Tanusree Sharma, Vivek Nair, Henry Wang, Yang Wang, Dawn Song
Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (Accepted)
- [C.24] **Unpacking How Decentralized Autonomous Organizations (DAOs) Work in Practice.**
Tanusree Sharma, Yujin Kwon, Kornrapat Pongmala, Henry Wang, Andrew Miller, Dawn Song, Yang Wang.
 IEEE ICBC (Accepted)
- [C.23] **Designing Accessible Obfuscation Support for Blind People's Visual Privacy**
 Lotus Zhang, Abigale Stangl, **Tanusree Sharma**, Yu-Yun Tseng, Inan Xu, Danna Gurari, Yang Wang, Leah Findlater. *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (Accepted)*
- [C.22] **Don't put all your eggs in one basket": Understanding Crypto Users' Perceptions and Practices Towards Multi-Wallet Usage.**
 Yaman Yu, **Tanusree Sharma**, Sauvik Das, Yang Wang.
Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (Accepted)
- [C.21] **Understanding User-Perceived Security Risks and Mitigation Strategies in the Web3 Ecosystem**
 Jianing Si, **Tanusree Sharma**, Ye Wang.
Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (Accepted)
- [C.20] **Disability-first Design and Creation of a Dataset Showing Private Visual Information Collected with People Who are Blind.** [Acceptance Rate: 24.7%]
Tanusree Sharma, Abigale Stangl, Lotus Zhang, Yu-Yun Tseng, Inan Xu, Leah Findlater, Danna Gurari, Yang Wang. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI23)*.
- [C.19] **User Perceptions and Experiences of Targeted Ads on Social Media Platforms: Learning from Bangladesh and India.** [Acceptance Rate: 24.7%]
Tanusree Sharma, Smirity Kaushik, Yaman Yu, Syed Ishtiaque Ahmed, Yang Wang. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI23)*
- [C.18] **A Mixed-Methods Study of Security Practices of Smart Contract Developers.** [Acceptance Rate: 29.2%]
Tanusree Sharma, Zhixuan Zhou, Andrew Miller, and Yang Wang.
32nd USENIX Security Symposium (USENIX Security 23)
- [C.17] **Iterative Design of An Accessible Crypto Wallet for Blind Users.** [Acceptance Rate: 29.2%]
Tanusree Sharma*, Zhixuan Zhou*, Luke Emano, Sauvik Das, Yang Wang.
Symposium on Usable Privacy and Security (SOUPS 2023)
- [C.16] **Rethinking Data Minimization from a User-Centered Approach: A Paradigm**

Tanusree Sharma, Lin Kyi, Yang Wang, Asia Beiga. *USENIX PEPR 23*. [Acceptance Rate: 29.2%]

- [C.15] **GuardLens: Supporting Safer Online Browsing for People with Visual Impairments.**
Smirity Kaushik, Natã M. Barbosa, Yaman Yu, **Tanusree Sharma**, Zachary Kilhoffer, JooYoung Seo, Sauvik Das, and Yang Wang.
Symposium on Usable Privacy and Security (SOUPS 2023). [Acceptance Rate: 29.2%]
- [C.14] **A First Look into Software Security Practices in Bangladesh.**
Tanusree Sharma*, Ankit Shrestha*, Pratyasha Saha, Syed Ishtiaque Ahmed, Mahdi Nasrullah Al-Ameen. *ACM Journal on Computing and Sustainable Societies (ACM COMPASS 23)*
- [C.13] **ChatGPT in HCI Research—A Trioethnography.** [Acceptance Rate: 34%]
Smit Desai, **Tanusree Sharma**, Pratyasha Saha.
Proceedings of the 5th International Conference on Conversational User Interfaces (ACM CUI 23)
- [C.12] **“It's A Blessing and A Curse”: Unpacking Creators' Practices with Non-Fungible Tokens (NFTs) and Their Communities.**
Tanusree Sharma, Zhixuan Zhou, Yun Huang, Yang Wang. *Crypto Economics Security Conference (CESC 22)*
- [C.11] **Privacy during pandemic: A global view of privacy practices around COVID-19 apps.**
Tanusree Sharma, Md Mirajul Islam, Anupam Das, SM Taiabul Haque, and Syed Ishtiaque Ahmed.
In ACM SIGCAS Conference on Computing and Sustainable Societies. (ACM COMPASS 21)
- [C.10] **Mapping risk assessment strategy for COVID-19 mobile apps' vulnerabilities.**
Tanusree Sharma, Hunter A. Dyer, Roy H. Campbell, and Masooda Bashir.
Proceedings of the Computing Conference 2021.
- [C.9] **Enabling user-centered privacy controls for mobile applications: COVID-19 perspective.**
Tanusree Sharma, Hunter A. Dyer, and Masooda Bashir.
ACM Transactions on Internet Technology (ACM TOIT 2021) [Acceptance Rate: 33%]
- [C.8] **Use of apps in the COVID-19 response and the loss of privacy protection.**
Tanusree Sharma, and Masooda Bashir.
Nature Communication 2020. (Nature 2020)
- [C.7] **Advocating for users' privacy protections: a case study of COVID-19 apps.**
Tanusree Sharma, Tian Wang, and Masooda Bashir.
Human-Computer Interaction with Mobile Devices and Services. (MobileHCI 20) [Acceptance Rate: 26.4%]
- [C.5] **Towards inclusive privacy protections in the cloud**
Tanusree Sharma, Tian Wang, Carlo Di Giulio, and Masooda Bashir.
In Applied Cryptography and Network Security. (ACNS 20)
- [C.5] **Preserving Privacy in Cyber-Physical Social Systems: An Anonymity and Access Control Approach**
Tanusree Sharma, John Bambenek, Masooda Bashir.
Proceedings of International Conference on the Internet of Things 2019. **Best Paper Award**
- [C.4] **Privacy apps for smartphones: An assessment of users' preferences and limitations.**
Tanusree Sharma, and Masooda Bashir.
In HCI for Cybersecurity, Privacy, and Trust. (HCII20)
- [C.3] **A restful e-governance application framework for people identity verification in the cloud**
Ahmedur Rahman, Shanto Roy, **Tanusree Sharma**, Md Whaiduzzaman
In Cloud Computing—CLOUD 2018
- [C.2] **PSO-NF-based vertical handoff decision for ubiquitous heterogeneous wireless network (UHWN)**

Saoreen Rahman, **Tanusree Sharma**, S. M. Reza, M. M. Rahman, and M. S. Kaiser.

In *2016 International Workshop on Computational Intelligence (IWCI)*, pp. 153-158. IEEE, 2016.

[C.1] **A dynamic data placement policy for heterogeneous Hadoop cluster.**

Tushar Saha. **Tanusree Sharma**

In *2017 4th International Conference on Advances in Electrical Engineering (ICAEE)* (pp. 302-307).

Conference Paper Under Review

[C.8] **Inclusive.AI: Engaging Underserved Populations in Democratic Decision-Making on AI.**

Tanusree Sharma, Jongwon Park, Yujin Kwon, Yiren Liu, Yun Huang, Sunny Liu, Dawn Song, Jeff Hancock, Yang Wang. *(Under review Nature Scientific Report)*

[C.7] **Future of Algorithmic Organization: Decentralized Autonomous Organizations (DAOs).**

Tanusree Sharma, Yujin Kwon, Kornapat Pongmala, Henry Wang, Andrew Miller, Dawn Song, Yun Huang, Yang Wang. *(Nature Scientific Report)*

[C.6] **Coinfused: Navigating the Current Practices and Perceived Risks among the Cryptocurrency Users in Bangladesh**

Tanusree Sharma, A.T.M Mizanur Rahman, Silvia Sandhi, Yang Wang, S M Taiabul Haque. *SOUPS 2024*

[C.5] **Locating Objects in Images Taken by People With Visual Impairments**

Yu-Yun Tseng, Alexander Bell, **Tanusree Sharma**, Lotus Zhang, Abigale Stangl, Leah Findlater, Yang Wang, Danna Gurari. *IJCV(R&R Round)*

[C.4] **Changing Trust: Auditing's Impact on Web3 Security from a User Perspective**

Zhuangtong Huang, Rui Jiang, **Tanusree Sharma**, Ye Wang. *IEEE S&P 2024 (under review)*

[C.3] **From Discussions to Decisions: Understanding User Behavior in Decentralized Autonomous Organizations.**

Janice Jianing SI, **Tanusree Sharma**, Silvan Bruggmann, Robin Fritsch, Roger Wattenhofer, Kanye Ye WANG. *CSCW 2024*

[C.2] **Cross-Country Examination of People's Experience with Targeted Advertising on social media.**

Smirity Kaushik, **Tanusree Sharma**, Yaman Yu, Amna Ali, Yang Wang, Yixing, Zou. *SOUPS 2024*

[C.1] **Across Fiat and Cryptocurrency: User Security Perceptions Stablecoin Practices.**

Maggie Yongqi GUAN, Yaman Yu, **Tanusree Sharma**, Molly Z. Huang, Kaihua Qin, Yang Wang, Kanye Ye WANG. *SOUPS 2024 (under review)*

Grants and Gifts

OpenAI 2023: Democratic inputs to AI

Role: Co-PI. Awarded \$110,000

Team: Tanusree Sharma, Yang Wang, Yun Huang, Dawn Song, Jeff Hancock, Sunny Liu

Meta 2022, Social Media Advertisement Technology Design for Global South

Role: Project Lead with PI: Yang Wang, Awarded \$100,000

Students Advised & Mentored

Hunter Dyer (UIUC, now PhD Student, George Washington University)

Spring 2020

- *Worked on a security assessment for COVID-19 applications.*

Jessica Mack (REU at UIUC)

Summer 2022

- Worked on Smart Contract Developer Security Practices Survey

Kornapat Pongmala (UC Berkeley, now at TikTok)

Fall 2022

- *Benchmarking and building assessment metrics for Decentralized Autonomous Organizations.*

Luke Emano (UIUC, now Founder at Timely)

Fall 2022

- *Worked on designing crypto wallet accessibility for blind users*

Inan Xu (UC Santa Cruz)	Summer 2023
- Worked on building a tool for private images and video obfuscation design	
Henry Wang (UIUC High School Student)	Fall 2023
- Worked on Usable crypto wallet design with MFKDF protocol.	
Melinda Hu (High School Student)	Fall 2023
- Worked on exploring At Ethics and design for youth	
Justin Wang (High School Student)	Fall 2023
- Worked on exploring At Ethics and design for youth	
Jongwon Park (UIUC)	Fall 2023
- Worked on building a tool for Democratic input to AI	
ATM Mizanur Rahman (BUET, Bangladesh)	Fall 2023
- Worked on navigating perceived risk among cryptocurrency users in Bangladesh	
Silvia Sandhi (Jahangirnagar University, Bangladesh)	Fall 2023
- Worked on navigating perceived risk among cryptocurrency users in Bangladesh	

Selected Talks and Seminars

- [T.8]. **Trustworthy and Democratic Design for Emerging Technologies.**
Invited talk at Arizona State University; Host: Rakibul Hasan, in person Oct 24, 2023
- [T.7] **Inclusive.AI: Democratic Tooling to engage the underserved population in AI**
Invited talk at OpenAI, San Francisco, CA; Host: OpenAI, in person Sept 28, 2023
- [T.6] **Rethinking Data Minimization in AI System from a User-Centered Approach: A Paradigm Shift.**
Invited talk at Usenix Privacy Engineering Practice and Respect 2023 at Santa Clara, CA, Sept 11-12, 2023
- [T.5] **Utilizing DAO Tooling for non-DAO Context: Democratic input to AI**
Invited to Talk at the DAO workshop at the Science of Blockchain conference at Stanford University
Host: Stanford Center for Blockchain Research, DAO Research Collective; In-person, Aug 31 2023
- [T.4] **Workings and metrics to evaluate Decentralized Autonomous Organizations (DAOs).**
Invited Talk at IC3 Blockchain Camp, Cornell Tech, In-person Jun 12-17, 2023
- [T.3] **Women in Computing & Higher Studies**
Invited Talk at IEEE Computer Society Bangladesh Chapter, July 22, 2023
- [T.2] **DAOs as early adopters: How DAOs work in practice**
Invited Session Lead at Plurality Conference at UC Berkeley; Host: Glen Weyl & Audrey Tang; Jan. 13-15, 2023
- [T.1] **BIV-Priv Dataset: Disability-First Design and Creation of a Dataset with Private Visual Information Collected With People Who Are Blind**
Invited Talk at iSchool Research Showcase; Host: UIUC iSchool, Nov 15, 2022

Teaching Assistant

- INFO- 490: Python for Data Science; Spring 2020**
Python programming language within the context of solving data-driven problems (i.e., Data Science).
- IS-457: Introduction to Data Science; Fall 2019**
Collecting and using data from a variety of sources, including the web, in a modern statistical inference and visualization paradigm.
- COSC- 3306/6310: Operating System; Fall 2018**
Process/task/thread management, scheduling, deadlock handling, memory management, file systems, networking, security issues, and embedded/real-time operating systems (RTOS).
- COSC- 4377: Computer Network; Spring 2019**
Design and implement networked applications and services.

Invited Guest Lectures

Evaluation Method of User Data <i>IS 236A: User Research & Evaluation</i> Host: Yang Wang University of Illinois at Urbana Champaign, School of Information Sciences	Fall 2023
Method for Designing & Prototyping <i>IS 226: Introduction to HCI</i> Host: Yun Huang University of Illinois at Urbana Champaign, School of Information Science	Fall 2023
DAO as Blockchain Governance <i>ECE 598: Principle of Blockchain</i> Host: Pramod Viswanath University of Illinois at Urbana Champaign, Department of Electrical and Computer Engineering	Spring 2022
Practices of Decentralized Autonomous Organizations <i>IS 400: Research Colloquium</i> Host: Ted Underwood University of Illinois at Urbana Champaign, School of Information Sciences	Spring 2022

Media Coverage

[Forbes 2020](#)

Privacy Risks of COVID-19 Application, published in Nature Communication 2020

[Meta Grant 2022](#)

Social Media Advertising and Privacy in Global South – Covered by iSchool UIUC.

[OpenAI Grant 2023](#)

Democratic Input to AI – Covered by OpenAI

Professional & Academic Service

Organizing Committee

2023 CHI Chair Assistant
2024 CHI Chair Assistant
2024 SOUPS Co-Chair (Mentoring)
2024 CHI Chair Assistant
2023 CHI Chair Assistant

Workshop Organizer

WIPS Workshop on Inclusive Privacy and Security, SOUPS 2023
WIPS Workshop on Inclusive Privacy and Security, SOUPS 2022

Session Chair

SOUPS Workshop on Inclusive Privacy and Security 2023 on Understudied & Innovative Session

Conference Reviewer

ACM CHI (2021-2024), ACM CSCW (2021-2024), IMWUT (2023), ACM DIS (2023), ACM MobileHCI (2023), ACM COMPASS (2023)



Received “special recognitions” for outstanding reviews for ACM CSCW 2022, ACM CHI 2023, ACM CHI 2023 Late Breaking Work, IMWUT 2023, CSCW 2024

Journal Reviewer

IEEE Transactions on Dependable and Secure Computing (2022-2023), IEEE Access (2022)

Community Service

Co-Chair, ACM-W UIUC chapter (2021-2022)

Privacy Testing, Safer Illinois App, UIUC, 2020

MOOC Classes for Underserved Community in Bangladesh of 9k+ Students (2019-now)

Volunteer, subcommittee on Privacy by Default Standards, Institute of Operational Privacy Design (IOPD) (2023-)

Technical Skills

Programming Languages/Library: C/C++, Java, Python, R, Android, iOS, JavaScript, SQL, HTML, PyTorch

UX Skills: Qualitative Research, Quantitative Research, Experiment Design, Data Analysis, UX Design, Prototyping