

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

Decentralized Governance, Emerging Technology (Web3, AI), Usable Security and Privacy, Human-Computer Interaction (HCI), Democratic AI, Accessibility, Organizational Technology

Education

Ph.D. Candidate in Informatics 2019- July 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 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. Beiga; Lab: Responsible Computing Group
Project: Operationalizing Data Minimization in AI System from 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 Aug 18 -May 19
Advisor: Albert Cheng; *Lab:* Real Time System (RTS) Lab
Project: Real Time Task Scheduling for Traffic Routing with Re-enforcement Learning Approach

European Union, Software Engineer Feb 18 -July 18
Project: Digital Health Management Scheme for Developing Countries

Bangladesh ICT Ministry, Research Assistant July 17 -Feb 18
Project: Design and developed a model of E-Governance Application for People Identity Verification in 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 PhD 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 on 9th International Conference on the Internet of Things	2020

Publications

- [C.21] **Tanusree Sharma, Lin Kyi, Yang Wang, Asia Biega**
(To be appeared Usenix 24)
- [C.20] **Disability-first Design and Creation of A Dataset Showing Private Visual Information Collected with People Who are Blind.**
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.**
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.**
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**
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*
- [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).
- [C.14] **A First Look into Software Security Practices in Bangladesh.**
Tanusree Sharma*, Ankit Shrestha*, Pratyasha Saha, Syed Ishtiaque Ahmed, Mahdi Nasrullah Al-

ACM Journal on Computing and Sustainable Societies (ACM COMPASS 23)

- [C.13] **ChatGPT in HCI Research—A Trioethnography.**
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, and 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 2021 Computing Conference.
- [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 (TOIT) 2021
- [C.8] **Use of apps in the COVID-19 response and the loss of privacy protection.**
Tanusree Sharma, and Masooda Bashir.
Nature Communication 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)
- [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 Workshops. (ACNS 20)
- [C.5] **Preserving Privacy in Cyber-physicalsocial 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 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).
 IEEE.

Grants and Gifts

- OpenAI:** Democratic inputs to AI
 Co-Investigator with Yang Wang, Yun Huang. Awarded \$110,000
 Team: Tanusree Sharma, Yang Wang, Yun Huang, Dawn Song, Jeff Hancock, Sunny Liu
- Meta,** *Social Media Advertisement Technology Design for Global South* \$100,000
 PhD Student Project Lead with PI: Yang Wang

Students Advised & Mentored

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| Hunter dyer (UIUC, now PhD Student, George Washington University)
- <i>Worked on a security assessment for COVID-19 applications.</i> | Spring 2020 |
| Jessica Mack (REU at UIUC)
- Worked on Smart Contract Developer Security Practices Survey | Summer 2022 |
| Kornrapat Pongmala (UC Berkeley, now at TikTok)
- <i>Benchmarking and building assessment metrics for Decentralized Autonomous Organization.</i> | Fall 2022 |
| Luke Emano (UIUC, now Founder at Timely)
- <i>Worked on designing crypto wallet accessibility for blind users</i> | Fall 2022 |
| Inan Xu (UC Santa Cruz)
- <i>Worked on building tool for private images and videos obfuscation design</i> | Summer 2023 |
| Henry Wang (UIUC High School Student)
- <i>Worked on Usable crypto wallet design with MFKDF protocol.</i> | Fall 2023 |
| Melinda Hu (High School Student)
- <i>Worked on exploring At Ethics and design for youth</i> | Fall 2023 |
| Justin Wang (High School Student)
- <i>Worked on exploring At Ethics and design for youth</i> | Fall 2023 |
| Jongwon Park (UIUC)
- <i>Worked on building tool for Democratic input to AI</i> | Fall 2023 |
| ATM Mizanur Rahman (BUET, Bangladesh)
- <i>Worked on navigating perceived risk among cryptocurrency users in Bangladesh</i> | Fall 2023 |
| Silvia Sandhi (Jahangirnagar University, Bangladesh)
- <i>Worked on navigating perceived risk among cryptocurrency users in Bangladesh</i> | Fall 2023 |

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 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 (PEPR 23) at Santa Clara, CA
 Host: Usenix Association, in person Sept 11-12, 2023

- [T.5] **Utilizing DAO Tooling for non-DAO context: Democratic input to AI**
Invited Talk at DAO workshop at 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
 Host: Initiative for CryptoCurrencies and Contracts (IC3)
 In person Jun 12-17, 2023

- [T.3] **Women in Computing & Higher studies**
Invited Talk at IEEE Computer Society Bangladesh Chapter
 Host: Risala Tasin Khan
 Virtual Visit, July 22, 2023

- [T.2] **DAOs as early adopters: How DAOs work in practice and could be utilizing plural technologies in governance and collaboration**
Invited Session Lead at Plurality Conference 2023 at UC Berkeley
 Host: Glen Weyl & Audrey Tang
 In person, 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

Python programming language within the context of solving data driven problems (i.e., Data Science).

IS-457: Introduction to Data Science

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

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

Design and implement networked applications and services.

Invited Guest Lectures

Evaluation Method of User Data

IS 236A: User Research & Evaluation

Host: Yang Wang

University of Illinois at Urbana Champaign, School of Information Sciences

Fall 2023

Method for Designing & Prototyping

IS 226: Introduction to HCI

Fall 2023

Host: Yun Huang

University of Illinois at Urbana Champaign, School of Information Science

DAO as Blockchain Governance

Spring 2022

ECE 598: Principle of Blockchain

Host: Pramod Viswanath

University of Illinois at Urbana Champaign, Department of Electrical and Computer Engineering

Practice of Decentralized Autonomous Organizations

Spring 2022

IS 400: Research Colloquium

Host: Ted Underwood

University of Illinois at Urbana Champaign, School of Information Sciences

Media Coverage

Forbes 2020

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

Meta Grant 2020

Social media advertising and privacy in Global South – Covered by iSchool UIUC.

OpenAI Grant 2023

Democratic Input to AI – Covered by iSchool UIUC.

Professional Service

Academic Service

Organizing Committee

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 7k+ Students (2019-now)

Technical Skills

Programming Languages: C, Java, Python, R, JavaScript, SQL, HTML and others

UX Skills: Qualitative Research, Quantitative Research, Experiment Design, UX Design, Prototype Development, Usability Testing