

# Tanusree Sharma

## *Curriculum Vitae*

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

Email: [tsharma6@illinois.edu](mailto:tsharma6@illinois.edu)  
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-

Ameen.

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

- [C.13] **ChatGPT in HCI Research—A Trioethnography.**  
Tanusree Sharma\*, Smit Desai\*, 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

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

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