

# Tanusree Sharma

2019–present   **PhD Student, Information Sciences, University of Illinois at Urbana Champaign.**  
**Grade:** CGPA: 4.0; **Credit Completed:** 57/57; **Expected Grad Date:** Dec, 2024

2011–2016 :   **BS. in Information Technology, Jahangirnagar University.**  
**CGPA:** 3.76/4.00; WES CGPA: 3.85/4.00

## Contribution

Designed and taught Programming Language Courses for Bangladesh Student Community [Youtube](#) and Mentoring Fellow Female Students in Bangladeshi Community for computing career

I contributed on [Safer Illinois app](#) project cycle in validating the design solution in respect to privacy components and security features that is now being used by **10K+** people in campus.

My findings in COVID-19 apps' privacy risks has been published by [NatureMedicine](#) and interviewed by [Forbes](#)

## Work Experience

### Graduate Research Assistant, University of Illinois at Urbana-Champaign

Jan, 2020 – present   **Accessible User Experiences for Marginalized Population.**

- **iWallet:** Iterative Design of Decentralized Finance application (wallet) for Blind users.
- **DAOInspector:** Assessment metrics & tooling to evaluate the success of DAO operation to facilitate organizational decision making
- **BIV-Priv:** Developing Novel Computer vision algorithm and building end-user mechanisms that empower blind users to independently safeguard private information in their pictures and videos.
- **MFKDF:** Multi-factor Key derivation function to improve onboarding in the context of crypto wallet.  
**Team:** SALT Lab, UIUC

### Research Intern, Max Planck Institute, Germany

May, 2022 – **Human Factors of Data Minimization in AI System.**

- August, 2022   ○ Human perspectives on Data minimization in Data-Driven Systems  
**Team:** Responsible Computing Group with Dr. Asia Biega

### Privacy Engineer Intern, Google

June, 2021 – **Privacy Risk Assessment Framework and Tooling.**

- August, 2021   ○ Data driven automated Privacy Tooling for risk assessment and privacy review to create data transparency in Google products.  
○ Static and Dynamic evaluation of cloud integration to identify and assess security and privacy risks for control design/implementation.  
**Team:** SFDC Privacy group at Google

### Graduate Teaching Assistant, University of Houston

Aug, 2018 – **Regularity based resource partitioning with RL.**

- May, 2019   ○ Developed Real-Time task scheduling with for traffic routing with Re-enforcement Learning approaches.  
**Team:** Real Time System Lab, UH

### Software Requirement Analyst (MIS officer), European Union Project

Feb, 2018 – **Digital Health Management Scheme.**

- July, 2018   ○ Developed application requirements for Mapping, identification, and capacity assessment of private health-care facilities in developing country.  
○ Utilized Quality Assurance Tools for evaluation of the product and developed a web application for criteria matching with targeted population.

## Research Assistant, Bangladesh ICT Ministry Project

July, 2017 – **E-Governance Voting Application-Deep Learning.**

- Feb, 2018
  - Designed a model of E-Governance Application for People Identity Verification in Cloud by deep neural network and system architecture with REST API.
  - Conducted experiment for CPU utilization and error rate with different dataset for Face Verification.

## Lecturer, Victoria University of Bangladesh

Feb, 2016 – **Teaching Classes.**

June, 2017 Conducted classes on Operating System and Web Technology

## Area of Interest

Accessibility, Applied AI in Usable Privacy and Security, Natural Language Processing, Human Computer Interaction, Data Ethics.

## Skills

**Programming:** Python, C, Java, R, HTML/CSS

**Technologies:** SAP cloud, REST API, Xampp, Hadoop, AWS EC2, Git, Keras, Apache Spark, Hive, Tableau, OpenRefine, Node.js, SQL, scikit-learn, Git

**Machine Learning:** TensorFlow, PyTorch, Caffe2

**Frequently used Algorithms:** Statistical Learning theory, Bayesian Networks, Naive Bayes (NB) family of algorithms, Support Vector Machines (SVM), Clustering, Time series analysis

## Publications

For details on other publications, see here in the links [ResearchGate](#) [GoogleScholar](#)

- Sharma, T., Stangl, A., Zhang, L., Tseng, Y., Xu, I., Findlater, L., Gurari, D., Wang, Y., Disability-First Design and Creation of A Dataset with Private Visual Information. [CHI 2023](#) (Accepted)
- Sharma, T., Kaushik, S., Yu, Y., Ahmed, S. I., Wang, Y. User Perceptions and Experiences of Targeted Ads on Social Media Platforms: Learning from Bangladesh and India. [CHI 2023](#) (Accepted)
- Sharma, T., Zhou, T., Wang, Y., The Design and Evaluation of An Accessible Crypto Wallet. [SOUPS 2023](#) (Submitted)
- Kaushik, S., Barbosa, N., Yu, Y., Sharma, T., Kilhoffer, Z., Das, S., Seo, J., Wang, Y. GuardLens: Supporting Safer Online Browsing for People with Visual Impairments. [Usenix 2023](#) (Submitted)
- Sharma, T., Zhou, T., Wang, Y., Exploring Security Perceptions and Practices of Smart Contract Developers. [Usenix 2023](#) (Submitted)
- Sharma, T., Zhou, T., Huang, Y., Wang, Y. "It's A Blessing and A Curse": Unpacking Creators' Practices with Non-Fungible Tokens (NFTs) and Their Communities". [DIS 2023](#) (Submitted)
- Sharma, T., Ahmed, S. I., MN Al-Ameen. Let's look outside the boundary: Security Practices and Challenges in Bangladesh Software Industries. [AsiaCCS 2022](#)
- Sharma, T., Islam, M., Das, A., Haque, T., Ahmed, I. Privacy during Pandemic: A Global View of Privacy Practices around COVID-19 Apps. [ACM Compass 2021](#)
- Sharma, T., Dyer, H. A., Bashir, M. (2021). Enabling User-centered Privacy Controls for Mobile Applications: COVID-19 Perspective. [ACM Transactions on Internet Technology \(TOIT\)](#), 21(1), 1-24.
- Sharma, T., Bashir, M. Advocating for Users' Privacy Protections: A Case study of COVID-19 apps. [MobileHCI2020](#)
- Sharma, T., Wang, T., Di Giulio, C., Bashir, M. Towards Inclusive Privacy Protections in the Cloud. 18th International Conference on Applied Cryptography and Network Security. [ACNS2020](#)
- Sharma, T., Md. Mirajul Islam, Anupam Das, S. M. Taiabul Haque, Syed Ishtiaque Ahmed. Privacy during Pandemic: A Global View of Privacy Practices around COVID-19 Apps. [ACMCompass](#)
- Sharma, T., Bashir, M. Use of apps in the COVID-19 response and the loss of privacy protection. [Nature Medicine](#)
- Sharma, T., Dyer, H. A., Campbell, R. H., Bashir, M. (2021). Mapping Risk Assessment Strategy for

- COVID-19 Mobile Apps' Vulnerabilities. [SAI2021](#) (Accpeted)
- Sharma, T., Bashir, M. Phishing Email Detection Method: Leveraging Data Across Different Organizations. [HCI2021](#)(accepted)
  - Rahman, S., Sharma, T., Mahmud, M. (2020, September). Improving alcoholism diagnosis: comparing instance-based classifiers against neural networks for classifying EEG signal. In International Conference on [Brain Informatics](#).
  - Sharma, T., Bambenek, J. C., Bashir, M. (2020). Preserving Privacy in Cyber-physical-social Systems: An Anonymity and Access Control Approach. CPSS Workshop at International Conference on the Internet of Things. [Best Paper Award](#).
  - Sharma, T., Bashir, M. Privacy Apps for Smartphones: An assessment of users' preferences and limitations. [HCI International 2020](#)
  - Shovon, A. R., Roy, S., Sharma, T., Whaiduzzaman, M. A restful e-governance application framework for people identity verification in cloud. [Cloud Computing - CLOUD 2018](#)
  - Rahman, S., Sharma, T., Reza, S. M., Rahman, M. M., Kaiser, M. S. PSO-NF based vertical handoff decision for ubiquitous heterogeneous wireless network (UHWN). [IEEE Xplore](#)
  - Saha, T. K., Sharma, T. A Dynamic Data Placement Policy for Heterogeneous Hadoop Cluster. [IEEE Xplore](#)

## Fellowships & Awards

- Received SIGCHI Gary Marsden Travel Award 2023
- Nomination by UIUC Grad College for Google PhD Fellowship 2022
- Virtual Grace Hopper Celebration Scholarship 2021
- USENIX Security '21 Diversity Grants 2021
- CRA-WP Scholar (Computing Research Association for Women) 2021
- CSRMP Scholar-Google's CS Research Mentorship Program-Class of 2021
- HackIllinois' Open Source Fellowship Program 2021
- CodePath Scholar 2020
- CRA-WP Scholar (Computing Research Association for Women) 2020
- Graduate College Travel Grant 2020, UIUC
- Best Paper Award on 9th International Conference on the Internet of Things (2020)
- Government Board Merit scholarship for outstanding results in Higher Secondary honor - 2010
- Government Board Merit Scholarship for outstanding results in Secondary honor- 2008

## Volunteer Services

- **CHI 2023**, Privacy and Security track. Subcommittee Chair Assistants.
- **WIPS@SOUPS 2022** organizing committee.
- **Teaching & Mentoring Students in Bangladesh.** Teaching R language and application based data science Classes online in a community Facebook group at Bangladesh including **6.5+k** members. Mentoring Students for computing careers. [JUHSC](#)
- **Co-Chair** for [ACM-W UIUC chapter](#) (Spring 2021- present)

## Extra-Curricular Activities

- Second Runner up, Inter University Badminton 2012. Bangladesh
- Second Runner up, Inter University Badminton 2013. Bangladesh
- First Runner Up, Inter department Badminton organized by Jahangirnagar University, 2012, 2013.

## Teaching Assistantship

- Spring, 2021 **INFO 490 MH1: Intro to Prog for Data Science with Python**, UIUC.
- Fall, 2019 : **IS 457: Introduction to Data Science: R**, UIUC.
- Fall, 2018 : **CS3306: Operating System Lab:c/c++**, University of Houston.
- Spring, 2019: **CS4377: Computer Network**, University of Houston.