

SASWAT DAS

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Responsible AI, (Differential) Privacy, Fairness, Security, Agentic LLMs

Education

University of Virginia (UVA)

Ph.D. in Computer Science

4.0 GPA

Aug. 2023 – Present

Charlottesville, Virginia

National Institute of Science Education and Research (NISER)

Integrated M.Sc. (BS + MS) in Mathematics (Minor in Computer Science)

8.39/10.0 CGPA; 9.44/10.0 in Computer Science

Jul. 2018 – May 2023

Bhubaneswar, India

Experience

Department of Computer Science, University of Virginia

Graduate Research Assistant (PhD)

- Mentor: Dr. Ferdinando Fioretto
- Focus Areas: Differential Privacy, Fairness, Responsible AI, Agentic LLMs

Aug 2023 – Present

Charlottesville, VA

EECS, Syracuse University

Visiting Research Scholar/Collaborator

- Mentor: Dr. Ferdinando Fioretto (now at UVA)
- Focus Areas: Differential Privacy, Fairness, Responsible AI

June 2022 – July 2023

Syracuse, NY (Online after Aug 2022)

School of Computer Sciences, NISER

MS Research Scholar

- Mentor: Dr. Subhankar Mishra
- Focus Areas: Differential Privacy, Security, Responsible AI

Aug. 2021 – May 2023

Bhubaneswar, India

School of Computer Sciences, NISER

BS Winter Research Intern

- Mentor: Dr. Rishiraj Bhattacharyya (Now at the University of Birmingham)
- Focus Areas: Blockchain, P2P Networks, Cryptography, Zero-Knowledge Proofs

Dec. 2019 – Jan. 2020

Bhubaneswar, India

School of Computer Sciences, NISER

BS Summer Research Intern

- Mentor: Dr. Rishiraj Bhattacharyya (Now at the University of Birmingham)
- Focus Areas: Blockchain, P2P Networks, Cryptography

May 2019 – July 2019

Bhubaneswar, India

Publications

Conference Publications

Fairness Issues and Mitigations in (Differentially Private) Socio-demographic Data Processes

2025

Joonhyuk Ko, Juba Ziani, *Saswat Das*, Matt Williams, Ferdinando Fioretto

Accepted at **AAAI-25 (Oral Presentation)** and at **AAAI-PPAI-25 (Oral Presentation)**; *arXiv:2408.08471*

Disparate Impact on Group Accuracy of Linearization for Private Inference

2024

Saswat Das, Marco Romanelli, Ferdinando Fioretto

Accepted at **ICML-24**; *arXiv:2402.03629*

Finding ϵ and δ of Traditional Disclosure Control Systems

2024

Saswat Das, Keyu Zhu, Pascal van Hentenryck, Christine Task, Ferdinando Fioretto

Accepted at **AAAI-24**; DOI:10.1609/aaai.v38i20.30204

Workshop Publications

🏆 **Low-rank Finetuning for LLMs is Inherently Unfair** **2025**

Saswat Das, Marco Romanelli, Cuong Tran, Zarreen Reza, Bhavya Kailkhura, Ferdinando Fioretto

Accepted at **CoLoRAI @ AAI-25; Best Paper Award**; *arXiv:2405.18572*

Conversational Privacy Attacks Against Agentic LLMs **2025**

Saswat Das, Joseph Moretto, David Evans, Ferdinando Fioretto

Accepted at **PPAI-25** (Extended Abstract)

Examining Deidentified Data Quality using NIST Datasets and Tools **2023**

Saswat Das, Razane Tajeddine, Ferdinando Fioretto

Accepted at **NIST CRC 2023**

Fair Context-Aware Privacy Threat Modelling **2023**

Saswat Das, Rakshit Naidu

Accepted at **WPTM at USENIX SOUPS 2022**; *arXiv:2207.09750*

Book Chapters

Advances in Differential Privacy and Differentially Private Machine Learning: A Survey **2023**

Saswat Das, Subhankar Mishra

Information Technology Security (Springer Nature)

Selected Honours

- **Best Paper Award** for “Low-rank Finetuning for LLMs is Inherently Unfair” at CoLoRAI Workshop at AAI-25
- **AAAI-25 - Oral Presentation** (Paper Title: Fairness Issues and Mitigations in (Differentially Private) Socio-demographic Data Processes)
- **AAAI - Student Travel Award** (2024 and 2025)
- **UVA Computer Science Scholarship** (2023-24)
- Selected for the **ELLIS Europe PhD Programme (2023)**
- **DISHA Research Fellowship, Department of Atomic Energy, Government of India (2018-2023)**
- Selected for **TIFR – Visiting Students’ Research Programme (VSRP), 2022 in Technology & Computer Science**
- **National Talent Search (NTS) Scholarship, NCERT, India (2016)**

Invited Talks

- **Google Privacy Seminar (May 2025)** - With Ferdinando Fioretto on “Auditing Privacy Leakage in LLM Agents”
- **TOC4Fairness (March 2025)** - With Joonhyuk Ko on “Fairness Issues and Mitigations in (Differentially Private) Socio-demographic Data Processes”
- **NIST CRC Workshop (December 2023)** - On “Examining Deidentified Data Quality using NIST Datasets and Tools”

Students Advised

- Joonhyuk Ko - BS, University of Virginia
- Eric Nguyen - BA, University of Virginia

Teaching

- CS 6501 - Responsible AI: Privacy, Fairness, and Robustness (UVA, Spring 2025)
- CS 4710 - Artificial Intelligence (UVA, Fall 2024)

Service/Reviewing

- Workshop Workflow Co-Chair - AAAI-PPAI 2025
- Reviewer - NeurIPS 2024, ICML 2025
- Program Committee Member - AAAI 2024, AAAI-PPAI 2024, AAAI 2025
- Emergency Reviewer - AAMAS 2023, AAMAS 2025
- External Reviewer - National Institute of Standards and Technology (NIST) (2023)

Other Associations

- External Collaborator - Lawrence Livermore National Laboratory (2024 - Present)

Volunteering/Organising

Reading Group on Responsible Generative AI, University of Virginia **Oct. 2023 - Present**
Organiser *at UVA*

- Organising the reading group on responsible generative AI at the University of Virginia where members of various research groups that work on responsible AI/generative AI come together to discuss recent advancements and future directions of work.

CodeInPlace, Stanford University **Apr. 2021 - May 2021**
Section Leader/Teaching Assistant *Online; Organised by Stanford University*

- Taught coding to a section of students from a global pool of applicants using material from the first half of Stanford University's popular course, CS106A.

School of Mathematical Sciences, NISER **Feb. 2021 - May 2021**
Department Mathematics Tutor *At NISER*

- Served as a mathematics tutor to freshmen in the spring of 2021 as part of an initiative by mathematics majors at the School of Mathematical Sciences, NISER.

Aveti Learning **Apr. 2020 - Sep 2022**
Volunteer/Tutor/Mentor *Online*

- Served as an online mathematics tutor and mentor to high school students in rural Eastern India to make quality education and college advice more accessible.

Avanti Fellows **Sep. 2018 - Aug. 2019**
Section Leader/Teaching Assistant *Dhenkanal, India*

- Served as a mentor and mathematics tutor to high school students at JNV Dhenkanal as part of the acclaimed Avanti Fellows programme.

Workshops and Summer/Winter Schools

AI-SCORE: The AI School for CS and OR Education **May-Jun 2024**
Attendee; organised on the UMD College Park campus. *INFORMS/ACM SIGAI*

Technion: Summer School on Computer & Cyber Security **September 2020**
Attendee *Organised by Technion, Israel*

IIT-D: Winter School on Theoretical Computer Science **December 2022**
Accepted Attendee *Organised by IIT-Delhi*

- Did not attend due to academic schedule conflicts.

USENIX SOUPS '23: Workshop on Privacy Threat Modeling **August 2022**
Presenter/Attendee *Organised by MITRE at USENIX SOUPS 2023*

- Presented a short paper on context-aware fair privacy threat modeling.

Leadership / Extracurricular

Undergraduate Committee of the School

Dec. 2020 - Dec. 2022

Student Representative

School of Mathematical Sciences, NISER

- Served as one of two student representatives to the Undergraduate Committee of the School (UGCS) of Mathematical Sciences, NISER, an honour bestowed upon well-performing students by the school.
- Helped professors design and develop the academic course structure, pedagogy, and evaluation schemes of the undergraduate programme.

Inventa Magazine

July 2021 - Dec. 2021

Editor

IISERs, NISER, CeBS, and IISc (India)

- Worked on the editorial board for Inventa, an annual national science outreach magazine published jointly by the premier public research institutes of India: NISER, CeBS, IISc, and the IISERs.

Quizone (Campus Quiz Club), NISER

May. 2019 - Nov. 2021

President

NISER

- Served as the president of Quizone, the quiz club of NISER, HBNI, for two consecutive terms.
- Organised and hosted quizzes (online and offline), which involved planning and running logistics, making questions, maintaining a social media presence for the club, engaging with partners and sponsors etc.
- Helped codify club rules and regulations by drafting a club constitution.

Cultural Committee, NISER

Aug. 2019 - Nov. 2021

Editor

NISER

- Served as a member of the cultural committee of NISER, which is responsible for planning and organising cultural events in the college.

Delhi Public School Kalinga

Sep. 2016 - July 2018

Head Boy (Students' Council President)

Odisha, India

- Served as the Head Boy (2017-18) and Vice Head Boy (2016-17) of Delhi Public School Kalinga, in a role which involved representing the school on an interschool level, presiding over the students' council, organising events, and looking after the welfare and interests of the students of the school.

Skills (Not Exhaustive)

Programming/Scripting Languages: Python, R, C++, HTML/CSS, SQL, L^AT_EX

Developer Tools: VS Code, SLURM, AWS Cloud, R Studio, etc.

Selected Libraries: Opacus, OpenDP/SmartNoise, PyTorch, HuggingFace Transformers, Captum, sdcMicro + other common libraries

Languages: English, Hindi, Odia, (familiarity with) French