

SASWAT DAS

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Responsible AI, (Differential) Privacy, Fairness, Security

Education

University of Virginia (UVA)

Ph.D. in Computer Science

Aug. 2023 – Present

Charlottesville, Virginia

National Institute of Science Education and Research (NISER)

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

Jul. 2018 – May 2023

Bhubaneswar, India

Experience

EECS, Syracuse University

Visiting Research Scholar

June 2022 – July 2023

Syracuse, NY

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

School of Computer Sciences, NISER

MS Research Scholar

Aug. 2021 – May 2023

Bhubaneswar, India

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

School of Computer Sciences, NISER

BS Winter Research Intern

Dec. 2019 – Jan. 2020

Bhubaneswar, India

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

School of Computer Sciences, NISER

BS Summer Research Intern

May 2019 – July 2019

Bhubaneswar, India

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

Publications

Conference Publications

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*

Workshop Publications

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*

Book Chapters

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

2023

Saswat Das, Subhankar Mishra

Information Technology Security (Springer Nature)

Preprints

Disparate Impact on Group Accuracy of Linearization for Private Inference

2024

Saswat Das, Marco Romanelli, Ferdinando Fioretto

arXiv:2402.03629

Service/Reviewing

- Reviewer - PPAI 2024
- Program Committee Member - AAAI 2024
- Reviewer - AAMAS 2023
- External Reviewer - National Institute of Standards and Technology (NIST) (2023)

Selected Honours/Achievements

- Selected for the **ELLIS Europe PhD Programme (2023)**
- **DISHA Fellowship, Department of Atomic Energy, Government of India (2018-2023)**: Received a scholarship for attending college which includes a monthly stipend for food and lodging and an annual contingency grant for research endeavours.
- Selected for the **Winter School on Theoretical Computer Science at IIT Delhi (2022)**
- Selected for the prestigious **TIFR – Visiting Students’ Research Programme (VSRP), 2022 in Technology & Computer Science**
- **National Talent Search (NTS) Scholarship, NCERT, India (2016)**

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

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, Captum, sdcMicro + other common libraries

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