SASWAT **DAS**

Gautam Nagar, Bhubaneswar, India · +91 637 014 7889
saswat.das@niser.ac.in · linkedin.com/in/saswat-das-3b7051179/

Diligent, quality-driven and energetic student researcher currently pursuing an Integrated M.Sc. degree, majoring in Mathematics with a minor in Theoretical Computer Science. Possesses mathematical, coding and communication skills, with prior experience with internships and projects involving theoretical computer science, AI and privacy. Adaptable and willing to take on challenging projects, picking up skills at a brisk pace.

EXPERIENCE

MARCH 2021 - PRESENT
STUDENT RESEARCHER, SHUBHANKAR MISHRA'S LAB, SCHOOL OF COMPUTER SCIENCES, NISER

Mentor: Dr. Subhankar Mishra, School of Computer Sciences, NISER, HBNI
Research Focus: Privacy preserving technologies in the context of AI viz. differential privacy, federated learning, and fairness.
Some (Ongoing) Projects: Studying Central Differential Privacy in GNNs, survey on novel developments in Differential Privacy, communication efficiency in federated learning, federated learning models for P2P networks.

SEPTEMBER 2020
ATTENDEE/PARTICIPANT, SUMMER SCHOOL ON COMPUTER & CYBER SECURITY 2020, TECHNION

Topics covered: Security and privacy. In particular: Tor, mixnets, private messaging systems, differential privacy, privacy by design, privacy-preserving contact tracing and machine learning, and economic and technological aspects of privacy (not exhaustive).

DEC 2019 – JAN 2020
WINTER INTERN, SCHOOL OF COMPUTER SCIENCES, NISER, BHUBANESWAR

Supervisor: Dr. Rishiraj Bhattacharyya, School of Computer Sciences, NISER.
Focus: Zero knowledge (zk) proofs and their applications, emerging secure zk-based cryptocurrencies/systems like Zerocoin, Zerocash etc., their mechanics, and an in-depth study into the mathematics behind zk-SNARKs.

MAY 2019 – JULY 2019
SUMMER INTERN, SCHOOL OF COMPUTER SCIENCES, NISER, BHUBANESWAR

Supervisor: Dr. Rishiraj Bhattacharyya, School of Computer Sciences, NISER.
Topics covered: Hash functions/hash data structures, blockchains, cryptocurrencies and decentralised cryptosystems viz. Bitcoin, Ethereum, decentralised peer to peer networks, smart contracts, proofs of work and stake, privacy and pseudonymity and relevant implementations etc.
Other Tasks Completed: Presented talks on said topics and wrote a report on smart contracts and their applications, existing and upcoming.

VOLUNTEERING/TEACHING

EDITOR, INVENTA MAGAZINE   JULY 2021 – DECEMBER 2021
Worked on the editorial board for Inventa, an annual science outreach magazine published jointly by NISER, CeBS, IISc, and the IISERs.

SECTION LEADER, CODEINPLACE, STANFORD UNIVERSITY   APRIL 2021 – MAY 2021

Served as a section leader in Stanford University's CodeInPlace programme and 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.

ONLINE MENTOR AND TUTOR, AVETI LEARNING   APRIL 2020 – PRESENT

Serving as an online tutor and mentor to high school students in rural Eastern India

STUDENT MENTOR, AVANTI FELLOWS   SEPT 2018 – AUG 2019

Served as a mentor to high school students at JNV Dhenkanal

EDUCATION

JUL 2018 – PRESENT

INTEGRATED MSC, NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR

- Majoring in Mathematics and Minoring in Theoretical Computer Science (Currently in the 8th Semester)
- **Current CGPA : 8.01; Master's Years CGPA: 9.33**
- **Last Semester SGPA : 9.33**
- **Excellent academic record in computer sciences (GPA: 9.25/10)**; top grades in courses including cryptography and machine learning
- **Class Representative** (1st and 2nd Semesters)
- **Student Representative**, Undergraduate Committee of the School of Mathematical Sciences
- Student Tutor for freshmen in mathematics
- Former President of Quizone, the Campus Quiz Club (2019 - 2021)
- Former Member, NISER Cultural Committee (2019 - 2021)
- Co-Editor, Jijnasa (NISER's Campus Magazine)
- Active Participant in Campus Activities and Science Outreach Programmes (NISER Open Day etc.)
- Student speaker for talks organised by the Mathematics and Coding Clubs of NISER

APR 2011 - MAY 2018

AISSE & AISSCE (SECONDARY AND HIGH SCHOOL), DPS KALINGA, PHULNAKHARA

- Served as the Head Boy/School Captain of the School
- Recipient of Multiple Scholar Badges and Proficiency Honours
- NTSE (National Talent Search Examination) Scholar (qualified both stages)
- Secured 10 CGPA in AISSE (Grade 10 Matriculation Exams)
- Secured 92% in AISSCE (Science Stream) (Grade 12 Exams)

NOTABLE SKILLS/TRAITS

- Lingual Proficiency: Native/Bilingual Fluency in English, Hindi, Odia, familiarity with French
- Languages and Tools: C++, SQL, Python, JavaScript, LaTeX
- Familiar with the use of Linux (Arch and Debian based)

- Teaching and Tutoring Experience
- Soft Skills: Leadership and Team Management, Diligence, Quick Learning, Event Organisation, Public Speaking and Presentation Skills, Time Management