

Souradip Nath

School of Computing and Augmented Intelligence
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RESEARCH INTERESTS

Access Control and Authorization; Human Factors in Security and Privacy

EDUCATION

Arizona State University

Ph.D. in Computer Science, Advisor: Dr. Gail-Joon Ahn, GPA: 4.00/4.00

Tempe, AZ

Fall 2023–Current

Arizona State University

M.S. in Computer Science, GPA: 4.00/4.00, Converted to a Ph.D.

Tempe, AZ

Fall 2022–Fall 2023

Indian Institute of Engineering Science and Technology, Shibpur

B.Tech. in Information Technology, GPA: 9.93/10.00, First Class with Honors

Howrah, India

Fall 2018–Spring 2022

- Capstone: “Development of an Online Document Tracking System”, 2022
- Capstone: “Development of an Academic Search Engine”, 2021

RESEARCH EXPERIENCE

Arizona State University, SEFCOM Lab

Graduate Research Assistant

Tempe, AZ

Spring 2023–Current

- **Advisors:** Dr. Gail-Joon Ahn, Dr. Jaeyong Baek, Dr. Carlos Rubio-Medrano
- Working towards the design and development of a **Collaboration-aware Access Management** Framework for Scientific Resource Sharing and Privilege Management
- Performed a **qualitative study** involving researchers and system administrators to derive security requirements
- Surveyed different **Access Control Models** to examine their applicability to scientific resource access management in large-scale cyberinfrastructures

Indian Institute of Engineering Science and Technology, Shibpur

Summer Research Intern

Howrah, India

Summer 2020

- **Advisor:** Dr. Ruchira Naskar
- Researched “Image Splicing Detection using Deep Neural Networks” with a Proof of Concept implemented using Python frameworks Keras, and Tensorflow
- Proposed a novel Neural Network to classify authentic and spliced images with more than 97% accuracy

PUBLICATIONS

- [1] **S. Nath** and R. Naskar, “Automated image splicing detection using deep cnn-learned features and ann-based classifier”, *Signal, Image and Video Processing*, vol. 15, pp. 1601–1608, 2021.

INDUSTRY EXPERIENCE

Deutsche Bank

Technology Analyst Intern

Pune, India

Summer 2021

- Utilized Python Pandas library to clean large datasets of scheduled jobs, conducted data analysis, and came up with an optimization algorithm for job scheduling using the Greedy algorithm
- Collaborated with a team of 3 and proposed a general framework for identifying an optimized job scheduling against a multi-parameter cost function

PROFESSIONAL SERVICE

External Reviewer

- [SACMAT] ACM Symposium on Access Control Models and Technologies 2024

Journal Peer Reviewer

- [MTA] Multimedia Tools and Applications 2024

PROJECTS

An entire list of my projects can be found on my [LinkedIn](#).

Optimizing Referee Assignment in Vehicle Insurance Companies using Clingo

Knowledge Representation and Reasoning, Class Project

Tempe, AZ

Spring 2023

- Proposed a novel and efficient solution for the Referee Assignment Problem for vehicle insurance companies from the ASP Challenges 2019, using Clingo

Digital Chain of Custody

Computer and Network Security, Class Project

Tempe, AZ

Fall 2022

- Collaborated with a team of 3 on an end-to-end design and implementation of a digital equivalent of Chain of Custody (CoC) based on an Object-Oriented design in Python

SKILLS

- **Programming Languages:** C/C++, Python, JavaScript, Java, XML
- **Tools, Databases, and OS:** Node.JS, Flask, MS Office, SQL, MongoDB, Windows, Linux/Unix, Git

LANGUAGES

- **English:** Full Professional Proficiency
 - **EXAM:** IELTS Academic (Band 8.5/9.0), 2021
- **Bengali:** Native / Bilingual Proficiency
- **Spanish:** Elementary Proficiency

RELEVANT COURSEWORK

- **Software and Information Assurance:** Information and System Security, Computer and Network Forensics, Software Security, Applied Cryptography, Software Engineering, Human-Computer Interaction
- **Intelligent and Interactive Systems:** Artificial Intelligence, Data Mining, Machine Learning, Internet and Web Technologies, Soft Computing
- **Foundations of Computation:** Design and Analysis of Algorithms, Formal Language and Automata, Compiler Design, Discrete Mathematics, Knowledge Representation and Reasoning
- **Architecture and Networked Systems:** Database Management System, Operating Systems, Microprocessors, Computer Architecture, Information and Fuzzy Systems

SCHOLARSHIPS AND AWARDS

- President of India Gold Medal, University Topper (Undergraduate) Dec 2022
- IEST Silver Medal, Department Topper (Information Technology) Dec 2022
- ASU New American University Scholarship Aug 2022
- Swami Vivekananda West Bengal Government Merit Scholarship Aug 2018
- G.P Birla Merit Scholarship Aug 2018
- State Board Topper – West Bengal Council of Higher Secondary Exam Jun 2018
- State Board Topper – West Bengal Board of Secondary Exam May 2016

EXTRACURRICULAR ACTIVITIES

- Member, Fulton Academic Integrity Matters (FAIM) Program, ASU Tempe Fall 2023–Current
Served on the academic integrity appeal hearing committee alongside esteemed faculty members.
- Mentor, Topmate.io Summer 2023–Current
Provide personalized 1:1 guidance and support to individuals interested in higher education abroad.
- Member, Programming and Activities Board (PAB), ASU Tempe Fall 2023–Spring 2024
Contributed to the success of numerous vibrant college events as an integral member of the organizing committee.
- Member, Senate Undergraduate Committee (SUGC), IEST, Shibpur Fall 2019–Spring 2022
Played an integral role in the committee dedicated to addressing a range of academic issues.