

EDUCATION

- Arizona State University** Tempe, AZ
Ph.D. in Computer Science, Advisor: Dr. Gail-Joon Ahn Fall 2023–Current
- Arizona State University** Tempe, AZ
M.S. in Computer Science, GPA: 4.00/4.00, Converted to a Ph.D. Fall 2022–Fall 2023
- Indian Institute of Engineering Science and Technology, Shibpur** Howrah, India
B.Tech. in Information Technology, GPA: 9.93/10.00, First Class with Honors 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** Tempe, AZ
Graduate Research Assistant Spring 2023–Current
- **Advisors:** Dr. Gail-Joon Ahn, Dr. Jaejong Baek, Dr. Carlos Rubio-Medrano
 - Working towards the design and development of a **Zero-Trust Resource Access Management** Framework for Scientific Collaborations
 - Performed a **qualitative study** involving scientists and system administrators to derive security requirements
 - Surveyed different **Access Control Models** to examine their applicability to scientific resource access management in large scale cyber infrastructures
- Indian Institute of Engineering Science and Technology, Shibpur** Howrah, India
Summer Research Intern 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

INDUSTRY EXPERIENCE

- Deutsche Bank** Pune, India
Technology Analyst Intern 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

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.

PROJECTS

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

Optimizing Referee Assignment in Vehicle Insurance Companies using Clingo Tempe, AZ
Knowledge Representation and Reasoning, Class Project 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 Tempe, AZ
Computer and Network Security, Class Project 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

Development of an Online Document Tracking System Howrah, India
Undergraduate Capstone Project Spring 2022

- Collaborated with a team of 3 on the development of a web application to systematically support the creation, management, and tracking of documents issued within an organization

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, Internet and Web Technologies
- **Foundations of Computation:** Design and Analysis of Algorithms, Formal Language and Automata, Compiler Design, Discrete Mathematics, Knowledge Representation and Reasoning, Soft Computing
- **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