

## WORK EXPERIENCE

### Harbor Labs, Associate Research Scientist, Baltimore, MD, USA

Feb 2024 – Present

- Conducting security consulting and penetration testing on medical devices and data.
- Collaborating with the clients to fix the identified issues and recommend mitigation techniques.
- Performing internal IT support and supporting company's legal engagements.

### SiriusXM, Security Intern, New York City, NY, USA

May 2023 – Aug 2023

- Worked with the Application Security Team to implement Developer Security Training for 1000+ engineers.
- Performed 30+ Security Risk Assessments and redesigned the evaluation process to make it 400% faster.
- Automated report notification system to improve Vulnerability Management for 25,000+ assets with Python.

## EDUCATION

### Johns Hopkins University (JHU), Baltimore, MD, USA

Aug 2022 – Dec 2023

- Degree: Master of Science in Security Informatics | GPA: 3.99/4 | TA: Security and Privacy in Computing (Fall 2023)
- Courses: Security and Privacy in Computing, Introduction to Cryptography, Cybersecurity Risk Management, Computer and Mobile Device Forensics, Network Security, Ethical Hacking, Mobile and Wireless Security

### Indian Institute of Technology (IIT) Goa, India

Aug 2018 – July 2022

- Degree: Bachelor of Technology in Computer Science and Engineering | GPA: 3.64/4
- Courses: Introduction to Information Security, Computer Networks, Computer Architecture, Operating Systems, Data Structures and Algorithms, Artificial Intelligence, Machine Learning, Software Systems Lab

## PROJECTS

### 5G Sentinel: Threat Modeling and DoS Attack Mitigation in ABot-Simulated Cellular Networks

Sep 2023 – Dec 2023

- Worked on Capstone Project under Dr. Ashutosh Dutta to explore the security aspects of a 5G cellular network, with the main aim of understanding 5G Network Core components, and 3GPP functions and procedures.
- Simulated a 5GCN environment using the ABot and Grafana framework, developed a robust threat model, and implemented a rudimentary defense mechanism against Denial of Service (DoS) attacks.

### Root the Ballot Box

Oct 2022 – Dec 2022

- Collaborated with a team to design a simulated electronic voting system, purposefully embedding known vulnerabilities to understand potential attack vectors and enhance the security framework.
- Identified and documented an external group's machine for vulnerabilities, both intentional and unintentional, applied ethical hacking techniques and best practices for ensuring electronic voting system integrity.

### SolSec Labs

Jan 2022 – June 2022

- Built web-based virtual training labs for Solidity developers to learn Smart Contracts security vulnerabilities.
- Developed and deployed the project using React/Node JS and Netlify/Heroku at [solseclabs.netlify.app](https://solseclabs.netlify.app)

### LSB Image Steganography Tool

Oct 2020 – Dec 2020

- Implemented the Least-Significant Bit Steganography technique to hide messages inside RGB/RGBA images.
- Utilized prevalent Pillow and NumPy Libraries in Python to write the encoding and decoding functions.

## TECHNICAL SKILLS

- **Programming:** Python, Golang, C/C++, Javascript,
- **Security:** Kali Linux, VAPT, OWASP Top 10, CTI, OSINT, MITRE ATT&CK, Cryptography, IAM, DevSecOps, NIST
- **Certifications:** CompTIA Security+, Google IT Support Specialization, CNSS, Operationalizing MITRE ATT&CK for SOCs (Picus)
- **Web/Cloud:** HTML, CSS, React, Node, SQL, MongoDB, Solidity, Git, Jenkins, Docker, AWS, GCP, DigitalOcean
- **Tools:** Wireshark, Nmap, Burp Suite, Ghidra, Splunk, Okta, SentinelOne, SAST/DAST/SCA, SOC/SIEM/SOAR
- **Productivity:** Microsoft Office, Google Suite, Atlassian Suite, Adobe Creative Suite, Slack, Zoom

## ACHIEVEMENTS

- Selected for the 2023B class of Google's CS Research Mentorship Program (CSRMP)
- Gold Medal for Best Outgoing Student (Overall) from Class of 2022 at IIT Goa
- Certificate of Appreciation for Poster Presentation at ACM India Winter School on CyberSecurity 2020
- Winner of HackQuest 2020 Solo Jeopardy-style CTF, GirlScript Foundation, India

## PUBLICATIONS

- Devang Jain and Sharad Sinha, "SolSec Labs: Virtual Labs for Learning Smart Contracts Security", IEEE Potentials (Published, Nov 2022) - [ieeexplore.ieee.org/document/9935793](https://ieeexplore.ieee.org/document/9935793)

## EXTRACURRICULAR AND VOLUNTEERING ACTIVITIES

- Co-founded IIT Goa's InfoSec Club, served as General Secretary of Academic Affairs, Film and Photography Club Head, Student Design Team Head and Class Representative at IIT Goa.
- Co-founder and Web Developer at Tokyo for India ([tokyoforindia.org](https://tokyoforindia.org)), a Covid-19 student-led fundraising initiative, raising over \$40,000 in donations in 2021 for marginalized communities across India.