# Rishit Saiya

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## EDUCATION

- **University of Southern California (USC)**   Masters in Cybersecurity — Aug 2022-May 2024
  Courses: Applied Cryptography, Security and Privacy, Security Systems, Foundations and Policy for Information Security

- **Indian Institute of Technology (IIT) Dharwad**   B.Tech, Computer Science and Engineering — Aug 2018-Apr 2022
  GPA: 8.94/10 (**Director Gold Medalist**)

## SKILLS AND CERTIFICATIONS

- **Skills:**   Analytics & Intelligence, Intrusion Detection, Digital Forensics, Strategy, Risk & Compliance, Data Loss Prevention

- **Languages & Tools:**   C++, Python, C, Bash, Git, Latex, Azure, AWS, Scapy, M365 Security, MDCA, Snort, Nano, Pytorch

- **Certifications:**   Fortinet - NSE-1, NSE-2. CSSLP - Secure Software Concepts, Secure Software Requirements

## EXPERIENCE

- **PwC** *(Cyber Risk & Regulatory Intern)*, USA — Jun 2023-Aug 2023
  - Worked in Cybersecurity, Risk & Regulatory practice wherein developed security strategies, DLP programs with policies to transform business operations. Integrated security compliances to perform cloud assessments focusing on DLP capabilities.
  - Designing and mapping security requirements of M365 suites and performed AWS cloud environment assessments to pertaining controls within the FFIEC, NIST CSF, CCF and ERC compliances

- **Toshiba** *(Cyber Security Intern)*, India — Oct 2021-Jun 2022
  - Integrated Security standards such as IEC 62351, IEC 61850 to Toshiba's ICS products. Designed IED related codes involving security standards such as TLS, OCSP, LDAP, X509 and communication with RBAC servers and HMI systems
  - Architected the cross platform C secure Plugin compatible for a cross platform array of embedded devices over an automated substation boosting efficiency by around 60%

- **LG Soft India** *(Intern)*, India — Aug 2021-Oct 2021
  - Designed a system for an Ethereum based User Authenticated distributed ledger, essentially a highly flexible blockchain architecture with potential transaction performance increase of 3 folds on Web OS based devices

- **CyberSapiens United LLC** *(Red Team Intern)*, India — Dec 2020-Jun 2021
  - Researched Red Team Assessment, Realistic Attack scenarios using tactics and techniques seen in real-world attacks. Coordinated tailored engagements to meet organizational needs, with objectives based on most relevant risks to organization
  - Performed assessments for clients namely Hangyo Ice Creams, Indian Institute of Science [IISc] mitigating 80% threats

- **BioTelemetry Inc** *(Summer Intern Trainee)*, USA — May 2019-Jun 2019
  - Researched on Evolution of Cyber Security Landscape, Information Security Standards
  - Surveyed Networking TCP/IP Fundamentals, Risk Management Mitigation in Information Security Compliance

## ACADEMIC PROJECTS

- **SANNA: Secure Acceleration of Neural Network Applications**   (Published in VLSID 2023 - IEEE Xplore)
  - Invented a novel technique by designing and implementing Heterogeneous Secure Systems (HSS) to mitigate Hardware Trojan threats on safety-critical systems, with a focus on preventing unverified results from third-party cores reaching IO peripherals
  - Demonstrated ability to leverage unverified results for speculative execution by up to 6.26% of subsequent layers in Neural Network applications, resulting in secure execution with minimal performance impact.

- **Reliability and Security of Edge Computing Devices for Smart Cities**   (Published in Nature Switzerland AG - Springer)
  - Researched optimized security approach for smart IoT devices in smart cities, mitigating potential cyberattacks. Proposed techniques on how security can be used to ensure data safety and legitimate access of one's information for most of real-time applications in smart city

- **Fake Packet Generation, Detection its Analysis using Network Security**   (Published in I2CT 2022 - IEEE Xplore)
  - Illustrated generation of fake packets in conventional network traffic and packet detection using tools namely Scapy, Snort. Devised strategies for Port Security to mitigate predominantly vulnerable threats are also defined

## AWARDS AND LEADERSHIP

- $2^{nd}$ **Runner Ups** (India Region) CSAW Conference 2020 (NYU & IIT Kanpur) - Embedded Security Challenge

- $9^{th}$ **Global Rank** (out of over 150+ world's elite teams) in ByteCTF 2020.

- Maintaining **Top 100 Global ranks** (out of over 100,000 participants) on CTFlearn (hacking) Platform

- Secured **Top 30 Global rank** in CSAW CTF 2022 with USC CTF Team

- Department Academic Student Mentor (2019 - 22), Student Mentorship Program, IIT Dharwad