

TANISHQ RUPAAL

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I aim to be a successful Security Specialist with a passion for technology and a strong academic background in Cybersecurity and computer science.

Education

- Georgia Institute of Technology Aug 2019 - May 2021 (Expected)
MS in Cybersecurity | CGPA (up to Spring 2020) - 3.86 / 4.0
- BITS Pilani Aug 2015 - Jun 2019
BE (Hons.) Computer Science | CGPA - 9.51 / 10.0



Experience

- Georgia Institute of Technology Jan 2020 - Present
Graduate Teaching Assistant | Course: CS 6035/4235 - Intro to InfoSec
 - Supervised course logistics and prepared examinations and weekly quizzes
 - Graded assignments and held weekly QnA sessions for a class of 200+ students
- Google LLC May 2020 - Aug 2020
Security Engineer Intern
 - Improved Fuzzbench build system to utilize a single source of truth for building benchmark docker images
 - Eliminate differences between standard and OSS-Fuzz benchmark integration
 - Integrated a coverage guided fuzzer (Manul) into Google Fuzzbench project
 - Written PoC fuzz targets for 2 open source projects
- Paramount Computer Systems FZ LLC Aug 2018 - Jan 2019
Cybersecurity Intern
 - Implemented a Secure File Upload Web Server with account management built for clients to upload log files securely to a public facing server
 - Developed Automated Vulnerability Assessment (VA) Bot programmed to automate VA for internal networks using Nessus, Mass-scan, Nmap and scripting on python and bash
- Paramount Computer Systems FZ LLC Jun 2017-Aug 2017
Intern
 - Performed VA in internal network of office space
 - Delivered sessions on Ransomware awareness to healthcare practitioners



Core Skills

- Proficient in **Python**, **bash** and fundamentals of C, C++, java, and web (html/css/js/php)
- Experienced in **Kali Linux** with good command over **Linux systems**
- Experienced with tools like **Nmap**, **Nikto**, **Wireshark**, **Hydra**, **Metasploit**
- Knowledgeable about **GDB**, **Ghidra** and binary exploitation techniques
- Knowledgeable in **Computer Networking**, **Docker** and build systems like **Make**
- Active participant in **Capture The Flag** competitions and Competitive coding



Projects

- **Analysis of Top 1 Million Domains** March 2020
 - Analyzed Majestic, Alexa and Tranco lists applied to 3 security metrics - HTTP/2.0 adoption, IPv6 adoption and TLS adoption
 - Crawled 1 million domain lists for 30 days and visualized popularity changes
 - Performed trend analysis for Top 100, 1000, 10000 forecasts
- **SubDextract - Sub domain enumeration** March 2020
 - Implemented using Python, useful even in local-only network environments
 - Incorporated fast and reliable queries such as CT logs, SAN, DNS, etc.
 - Yields 10x speedup with decrement of 30% # subdomains compared to Sublist3r
- **Cookie-Less secure Login** Jan 2019
 - Constructed login page without cookies using php and js constructs
 - Enforced security against SQLi, token/cookie based attacks and replay attacks
- **EncCat - Encrypted TCP socket Communication** May 2018
 - Created a secure communications and large file sharing tool on python
 - Emulated netcat with addition of a self-devised encryption scheme (salsa20 + rsa)
 - Yields 2x speedup for file transfers against cryptcat (twofish)
- **Secure Voting on Blockchain (Ethereum Platform)** Apr 2018
 - Developed a secure voting system using node.js in a team of 2
 - Secured against replay attacks, session hijacking, XSS and CSRF using helmet.js

Accomplishments

- Dubai Police CTF Competition - Top 15 (Feb 2019)
- Hack in The Box (HiTB) Conference 2018, Dubai (Oct 2018)
Secured Rank 1 (UAE) in CTF (Professional) competition under team "PCR_RT"
- IEEE Xtreme 11.0 : Programming competition (Oct 2017)
Secured Rank 1 (UAE), Rank 415 globally, under team "Optimise Prime"
- Research Proposal | Dubai Electronic Security Center (DESC)
Proposed a network topology with self healing threat identification and correction.
- Developed prototype for a **Healthcare activities Tracking System** as part of team Medikate in NYU Abu Dhabi Hackathon 2019
- Participated in Global OSINT Search Party CTF by TraceLabs
- Solved numerous challenges from HackTheBox, VulnHub, Root-me and Pwnable

Extra-Curricular and Hobbies

- President, Founder and Workshop Instructor for ACM The Hacker's Exclusive (HEX), an SIG (special interest group) at BITS Pilani, Dubai Campus
- Managed student employment and placements as a **Student Executive, Careers Division** at BITS Pilani, Dubai Campus
- Tinkering with linux systems and security tools in my home lab
- Avid involvement (talks and CTF) in Security Conferences like DEFCON, BSides, HiTB
- Drumming, Photography and Digital Concept Art

