

TANISHQ RUPAAL

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Passionate about Cyber Security. Detail-oriented, with a curious mind and ability to effectively learn fast. I aim to be successful as a Security Specialist.

Education

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

Experience

- **Security Engineer Intern** | **Google LLC**
May 2020 - Aug 2020
 - Improved Fuzzbench build system to use a single source of truth for building benchmark images.
 - Eliminate differences b/w 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.
- **Graduate Teaching Assistant** | **Georgia Institute of Technology**
Jan 2020 - Present | Course: CS 6035/4235 - Introduction to Information Security
 - Supervised course logistics and prepared examinations and weekly quizzes.
 - Graded assignments and held weekly QnA sessions for a class of 200+ students.
- **Intern** | **Paramount Computer Systems FZ LLC**
Aug 2018 - Jan 2019
 - Implemented a Secure File Upload Web Server
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 on python and bash.
- **Intern** | **Paramount Computer Systems FZ LLC**
Jun 2017-Aug 2017
 - Performed VA in the internal network of the office space.
 - Delivered sessions on Ransomware awareness to healthcare practitioners.

Core Skills

- Proficient in **Python** and **bash**. Others - C, C++, java, and web (html/css/js/php).
- Experienced in **Kali Linux** with good command over **Linux systems**.
- Experienced with **GDB**, **Ghidra** and binary exploitation techniques.
- Knowledgeable in **Computer Networking** and **Penetration-Testing**.
- 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 the 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 | Sept 2018**
 - 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.
- **Built 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 many 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**
- **Avid involvement in Security Conferences such as DEFCON, BSides, HiTB, etc**
- **Drummer (band Phantom Asylum, Dubai) - Rockschoool Drums Grade 4 (92%)**
- **Photography and Digital Concept Art**