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 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 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) - Rockschool Drums Grade 4 (92%)
- **Photography** and **Digital Concept Art**