Sathya Ramanathan

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Education

Oregon State University | Sept 2015 – Sept 2019
- Bachelor of Science (BS), Computer Science
- Specialization in Cybersecurity

Projects

Personal Website | https://satcom237.github.io/website

Google Authenticator | C++
- Developed an application that uses a Time-Based One Time Password (TOTP) algorithm to generate One Time Passwords (OTPs) every 30 seconds
- Improves device security by 76% by incorporating two-factor authentication
- Implemented in C++ utilizing the HMAC-SHA1 function (OpenSSL Library)

MyHoneyPot | Python
- Created a honeypot that logs unauthorized sample attempts to a server
- Used Tableau to process and analyze the relationship between malicious transactions and time by applying visual representations
- Sends email alerts of suspicious activity to admin leveraging better security
- Implemented in Python and Tableau

Secure User Web-App | PHP
- Created a web application for entering, storing, and retrieving information about users of a sample website
- User passwords are salted then hashed using the MD5 algorithm before being stored into the database – rendering it less vulnerable to lookup attacks
- Employs parameterized queries effectively preventing SQL injection attacks
- Implemented in MySQL, PHP, and HTML/CSS

Skills

Languages: (*Proficient*): C, C++, Python, SQL (*Familiar*): Bash, Java, PHP, JavaScript

Security: Malware & Threat Detection, Penetration Testing, Network/Web security, Digital Forensics, TCP/IP, SIEM Tools, AWS, IAM, Metasploit, OpenSSL, and YARA

Cryptography: Public Key Infrastructure (PKI), RSA, Diffie-Hellman, AES/3DES, CBC/CTR, SHA-2, MITM, One-Time Pads, Digital Certificates, and HMAC concepts

Courses

Cryptography, Network Security, Digital Forensics, Defense Against the Dark Arts, Introduction to Security, Computer Networks, Operating Systems I/II, Software Engineering I/II, Linux System Administration, Data Structures, Algorithms, Database Management Systems, Cloud/Web Development, and Theory of Computation

Certificates

CompTIA Security+ | (Expected January 2020)