Vibhu Mithal

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EDUCATION

Freshman at University of Wisconsin-Madison   Madison, WI
Bachelor of Science   Sep 2022
Intended Majors: Computer Science and Economics

Related Courses
Introduction to Computer Engineering, Programming I, Principles of Microeconomics, Calculus and analytic geometry 1, Wes-cs group meetings

SKILLS

- **Programming Languages:** Python, Java, Html, CSS
- **Database Knowledge:** MySQL, Redis
- **Operating Systems:** Windows, TAILS, Kali Linux, Debian
- **Concepts:** Digital Forensics, Web Penetration Testing, Cipher suites & packet transfer analysis, Containers, Nodes
- **Technologies:** Wireshark, Metasploit, Bettercap, Beef, Nmap, Burp Suite, Docker, K8s, Travis CI, AWS deployment
- **Network Protocols:** TCP, TLS, SSL, DNS, ARP, HTTP2, IP, HTTP3, SMTP, FTP

EXPERIENCE

7DOT2 IT CONSULTING   Delhi, India
Data Security Intern   Jan 2021-Feb 2021
- Worked on a project - "Secure Data Transfer".
- Found CVSS-6 vulnerability in the digital assets of the company, where the data and cookies were being transmitted unencrypted in the human-readable HTTP header requests.
- Used **Burp Suite and Wireshark** to find the flaw and surfed the internet to fix it.
- Received an appreciation letter from the proprietor of the company.

GEISTEK PHARMACEUTICALS (VIRTUAL)   Madrid, Spain
Research Assistant   May 2020-Nov 2021
- Worked with **Dr. Abhay Krishan** to gain knowledge about existing databases constituting data on the molecular structures and properties of natural materials.
- Concentrated on the **Literature Reviews and Citations**.
- Observed the Machine Learning approach to explore the chemical space of natural products.

PROJECTS

ContainED | Program | July 2022
- A simple bridge program developed using **Kubernetes (~ k8s)**, a management software designed for container applications by **Google**.
- This program **connects a MongoDB database to a web application** which provides remote access, avoids data loss by cloning, and centralizes security.
- **It is written in .yaml configuration, implements the concepts of Pods, Service, Deployments, ConfigMap and can be accessed by command line interface too.**

TLSv1.2 decryption | Concept | August 2021
- A process to decrypt the victim's POST and GET requests from mainstream applications like Instagram, twitter etc.
- The requests are encrypted by Transport Layer Security (TLS) protocol and are decrypted using **Wireshark and SSL Log Keys from browsers** on the host machine.
- The encrypted requests are decrypted to human-readable http headers and **these headers contain sensitive data and cookies which can be used to access the target's account without authentication.**

CERTIFICATIONS

Microsoft Technical Associate (MTA): Security Fundamentals (98-367)   25 Sep 2021
Introduction to Investing and Financial Literacy, Palo Alto Education   Sep 2020-Nov 2020
NSE training Institute Certification Program, Fortinet   15 May 2021