Kushagra Dwivedi

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Dedicated cloud and networking professional with a strong foundation in cybersecurity. Currently pursuing an Integrated MTech + BTech with a specialization in cybersecurity (Senior year). Passionate about problem-solving and leveraging cloud technologies to drive innovation. Seeking a challenging role to apply my academic knowledge and contribute to cutting-edge projects.

PROJECTS

Networking and Security Projects

Malware Analysis Lab with Isolated Virtual Network Setup

September 2024

- I created a secure malware analysis environment by setting up two virtual machines (VMs): a Windows 10 VM that I converted into FLARE VM and a REMnux VM.
- The two VMs were isolated from external networks, only allowing communication between them via a custom virtual network configuration.
- The REMnux VM was configured as the DNS server for the FLARE VM. This setup enabled safe and controlled malware analysis by ensuring that the malware within the FLARE VM couldn't communicate with anything beyond the isolated virtual network.

Setting Up Active Directory Domain Services with Windows Server 2019 in a Virtualized Environment.

August 2024

- I set up a Windows Server 2019 Domain Controller (DC) and a Windows 10 client within a virtualized environment.
- Using VirtualBox and VMware, I created an internal network with Active Directory Domain Services (AD DS), DHCP, and RAS/NAT to simulate a real-world environment.

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Cloud Projects

AWS HACKING LAB

September 2024

- Designed and deployed a cloud-based hacking lab on AWS to simulate an enterprise network with vulnerable machines for penetration testing.
- Configured a vulnerable image from VulnHub on AWS and set up a Kali Linux environment with GUI access for comprehensive security assessments.
- Automated lab deployment using infrastructure-as-code (IaC) practices with AWS CLI and Terraform.
- Utilized Kali Linux tools to monitor and analyze network traffic on the compromised instance.

AWS OpenVPN Server

August 2024

- Designed and deployed a cloud-based hacking lab on AWS to simulate an enterprise network with vulnerable machines for penetration testing.
- Configured a vulnerable image from VulnHub on AWS and set up a Kali Linux environment with GUI access for comprehensive security assessments.
- Automated lab deployment using infrastructure-as-code (IaC) practices with AWS CLI and Terraform.

• Utilized Kali Linux tools to monitor and analyze network traffic on the compromised instance.

Miscellaneous Projects

July 2022 - September 2024

- Ping/Multi Ping Web Application: Built a Python-based web app using the Bottle framework to ping and monitor client devices via DNS or IP addresses.
- Flight Managing Web Application: Developed a Django web app to manage and sort passengers by flights, with SQLite as the database.

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CERTIFICATES AND COURSES

- NPTEL Blockchain and its applications
- IIT Bombay TechFest Ethical Hacking
- Completed The Odin Project
- Google cybersecurity professional (Expected December '24)
- Preparing for CompTIA Sec+ Certification (Expected February '25)

WORK EXPERIENCE

• Ideated and built the UI/UX and worked as frontend dev for cashin.club

2023-2024

• Was hired as a graphic designer at ZAPPKODE co.

2023

EDUCATION

VELLORE INSTITUTE OF TECHNOLOGY, BHOPAL

2021-2026 (Expected)

Integrated Masters of Tech in Computer Sciences with specialization in Cyber Security

SKILLS

Python, HTML, CSS, SASS, Javascript, React, JSON, Django, Linux, TCP/IP, SQL, AWS, HTTP, SSH, Unix, Git, Bash, WSL2, Kali Linux Tools, Docker