

Srachet Rai

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About

Aspiring cyber security professional with a strong foundation in security, networking, web development, and machine learning. Passionate about innovation, digital security, and problem-solving in the evolving tech landscape.

Projects

TinyLinux

- A lightweight **Operating System** built with the **Linux kernel**, **custom shell (C programming)**, and efficient **system calls (assembly)**. (The **kernel being <1mb**)
- It provides a minimal OS environment for learning low-level system programming and OS development.
- Primarily for **embedded systems** or performance-critical applications requiring a **small OS footprint**.

Vulnerability Assessment in Docker and Podman (R&D Project)

- Setting up containers in **Docker** and **Podman**.
- Implementing **PoC exploits** in **C** and **Python** to demonstrate real-world security risks.
- Constructing intentionally **vulnerable containers** to analyze **attack vectors** and identifying security measures to mitigate potential threats.

Wifi-CSI Based Activity Recognition (Self Research Project)

- Use of **ESP32** to collect WiFi CSI to recognize daily human activities for camera-free activity monitoring.
- Used **Python** to convert CSI and audio into **heatmaps** and **mel-spectrograms**.
- Implemented **GANs** to recognize activities with CSI for smart home, health, and security applications.

UniHealth Application

- Developed a mobile app to streamline student healthcare in university hostels, presented at the **Google Students Developer Solution Challenge 2024**.
- Implemented health logs, doctor-student communication, and progress tracking.
- Designed a dynamic dashboard for real-time health monitoring and data management.
- Built using **Flutter** with **Dart**, integrating authentication using **OAuth** and responsive UI.

Healthmate

- Built with **Flask** to serve AI-generated text via a **REST API**.
- Utilizes the **Meta-Llama 3.1 8B** model from Hugging Face for text generation.
- Containerized using **Docker**, with a pre-cached model to save bandwidth.

Skills

Cybersecurity: Vulnerability Assessment & Penetration Testing, Networking Devices and Configuration, and Information Security.

Programming Languages & Development: Python, Java, Flutter, Node.js, React, React Three Fiber

Version Control: Git & GitHub

Operating Systems & Virtualization: Linux, VirtualBox, QEMU, Docker, Podman, Embedded systems

Graphic Design: Adobe Suite, Figma, Blender 3D

Soft Skills: Adaptability, Quick Learning, Leadership, Research

Certifications

Introduction to Cybersecurity – Cisco ([Link](#))

Cybersecurity fundamentals, threat detection, network vulnerabilities, privacy and data confidentiality, cyber best practices

Networking Basics – Cisco ([Link](#))

Network devices and protocols, data flow analysis, device configuration, network troubleshooting

Networking Devices and Initial Configuration – Cisco ([Link](#))

Cloud and virtualization benefits, IP addressing schemes, Cisco device configuration, connectivity testing, Cisco Packet Tracer proficiency

Google Cloud Platform (GCP) & Generative AI – Google ([Link GCP](#) & [AI](#))

Generative AI concepts, applications, differences from traditional machine learning, Google tools for Generative AI app development

Other Certifications - **Ethical Hacking** (Udemy), **Machine Learning** (IIT Bombay), **Blender** (Udemy)

Experience

Junior Web Designer

[Kalyan, Maharashtra]

Maa Karmaa Global Engineering LLP

[Apr 2023 - Sep 2023]

- Designed and developed web pages using **HTML/CSS**, improving **UI/UX** consistency.
- Created engaging graphic designs to enhance visual communication.
- Collaborated with cross-functional teams to implement responsive design solutions.

English Language Instructor

[Neemrana, Rajasthan]

NIIT Foundation

[Oct 2022 - Dec 2022]

- Conducted English language training for job readiness programs at the Career Development Center.
- Completed dedicated volunteering tenure over a 6-week period.
- Contributed to the Foundation's mission of empowering students through language skills.

TEDx Design Core

[Neemrana, Rajasthan]

TEDxNIITUniversity

[Oct 2023 - May 2024]

- Assisted in organizing and managing TEDx talks, contributing to an engaging experience for students.
- Designed promotional materials and event visuals, enhancing audience engagement.
- Captured and edited event footage, ensuring high-quality post-production output.

Education

NIIT University

[Neemrana, Rajasthan]

Bachelor of Technology in Computer Science

[2022 - 2026]

CGPA: 7.81

Additional

Language Skills: English , Hindi

Volunteering: Design(siNUoid), Design & Post-production(TEDxNIITUniversity), Instructor(NIIT Foundation)

Socials: Portfolio - www.srachetrai.tech : GitHub - github.com/Cryo : Linkdin - linkedin.com/in/srachetrai

Interests/Hobbies: 2D & 3D Digital art, Baking, Gaming