Srachet Rai

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About

Aspiring software developer with a strong foundation in web development, security 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**.

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 **Flutte**r 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.

Zen Garden

• A Gamified AI powered habit tracker.
• Built primarily with **Node.js**, **React** and **React Three Fiber.**
• Leverages gamification of habit tracking, making habit formation both fun and interactive.
• Emphasizes clean, modern interface using libraries to deliver a seamless habit-tracking experience.

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.

Skills

Programming Languages & Development: Python, Java, Flutter, Node.js, React
Version Control: Git & GitHub
Cybersecurity: Vulnerability Assessment & Penetration Testing, Ethical Hacking, Security Information & Event Management
Operating Systems & Virtualization: Linux, VirtualBox, QEMU, Docker, Podman, Embedded systems
Graphic Design: Adobe Suite, Figma, Blender 3D
Soft Skills: Adaptability, Quick Learning, Leadership, Research

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

Certifications

Google Cloud Platform (GCP) & Generative AI – **Google**
Ethical Hacking – **Udemy**
Machine Learning – **IIT Bombay**
Blender – **Udemy**

Additional

Language Skills: English , Hindi
Volunteering: Design(siNUsoid), Design & Post-production(TEDxNIITUniversity), Instructor(NIIT Foundation)
Socials: Portfolio - www.srachetrai.tech : GitHub - github.com/Cryio : Linkdin - linkedin.com/in/srachetrai
Interests/Hobbies: 2D & 3D Digital art, Baking, Gaming