SIDDHARTH RAI

Cybersecurity Analyst & Software Developer — B.Tech Computer Science Engineering, VIT Bhopal
Ghaziabad, Uttar Pradesh, India | siddharthrai16.work@gmail.com | github.com/lostcharonprivate-del |
www.linkedin.com/in/siddharth-rai-071a00433

SUMMARY

Cybersecurity Engineer specializing in network security, vulnerability analysis, and secure application development. Hands-on builder of security tools — dependency supply chain risk analysis and SOC workflow simulation — with a strong software engineering foundation spanning full-stack (React, React Native, Android) and computer vision (YOLOv11, OpenCV, OCR). Certified in networking, Python, and penetration testing (Kali Linux).

TECHNICAL SKILLS

Security: Network monitoring, firewall configuration, penetration testing (Nmap, Metasploit, Wireshark), vulnerability assessment, threat detection, risk mitigation, incident response, log analysis, intrusion detection, SIEM (Wazuh Manager), threat intelligence
Networking: Linux system administration, TCP/IP, routing protocols, network troubleshooting, performance analysis
Programming & Frameworks: Python, Java, JavaScript, TypeScript, React, React Native, Android Studio, OpenCV, PyTorch, YOLOv11, OCR pipelines
Tools & Platforms: Git/GitHub, Expo, Node.js, npm, REST APIs, OpenVSP, GIS / Remote Sensing, UI/UX design

TECHNICAL PROJECTS

Network Traffic Analyzer — Python
Python · Scapy · FastAPI · WebSocket
- Built a real-time network traffic analyzer in Python (Scapy, FastAPI, WebSocket) with a producer-consumer capture pipeline, thread-safe statistics engine, and honest backpressure/drop reporting.
- Shipped both a Rich-based CLI and a live web dashboard on one shared engine, validated by 200+ automated tests across Linux/macOS and Python 3.12–3.13 in CI.

Calmanac – Day Planner & Alarm App — TypeScript
React Native · Expo · TypeScript · AsyncStorage
- Built a cross-platform (iOS/Android) offline-first productivity app in React Native and Expo with a fully local, privacy-first architecture — all data persisted on-device via AsyncStorage with zero external data transmission.
- Implemented OS-level alarm scheduling via expo-notifications (reliable delivery even when the app is closed), including native Android exact-alarm permissions and high-importance notification channels.
- Designed data visualization features (donut charts and day×hour heatmaps using react-native-svg) for time-category balance tracking, plus a weekly recap engine comparing current activity against a trailing 4-week average.

Dependency Supply Chain Security Analyzer — Python
npm · PyPI · RubyGems · Maven Central
- Built a security tool that parses a project's resolved dependency tree across 4 package registries (npm, PyPI, RubyGems, Maven Central) to detect supply chain risk before deployment.
- Implemented automated detection across 5 risk categories: known CVEs, confirmed-malicious packages, typosquatting, dependency-confusion exposure, and unmaintained packages.

Helmet Detection & License Plate Recognition System — Python
YOLOv11 · PyTorch · OpenCV · OCR
- Built a real-time traffic-enforcement computer vision system using YOLOv11 to detect helmet usage and extract license plate text from images, video, and live webcam streams.
- Implemented a custom model training pipeline with dataset configuration and fine-tuning; integrated OCR preprocessing to automate end-to-end violation monitoring.

SOC Analyst Simulation Project — Network Security
Wazuh Manager · Threat Detection · Incident Response
- Simulated a Security Operations Center environment, performing log analysis, alert triage, and incident-response workflows against staged attack scenarios, applying intrusion detection, firewall rule analysis, and threat-intelligence techniques to mitigate simulated attacks.

EXPERIENCE

Web Developer — VSSAN Instruments Pvt. Ltd. — May 2026 – till date
www.vssaninstruments.com
- Designed and built the company's public website using React, Vite, Tailwind CSS, and Framer Motion, showcasing VSSAN's catalog of surveying and measurement equipment — including Total Stations, GPS/DGPS systems, laser levels, and echo sounders — for its B2B customer base.
- Built responsive, animated UI components and page transitions with Framer Motion, and optimized the production build pipeline with Vite for fast load times.

Aircraft Design Engineer — India Space Lab (Remote) — Feb 2026 – Mar 2026
- Designed a Cessna 210 (NASA variant) aircraft model in OpenVSP, modeling fuselage, wing geometry, tail assemblies, and propulsion from real dimensional parameters; applied aspect ratio, MAC, and tail surface area analysis.

EDUCATION

B.Tech – Computer Science Engineering | *VIT Bhopal* — 2022 – 2026
- CGPA: 7.2 / 10

Class 12 · HSC | *Delhi Public School, Ghaziabad* — Feb 2022
Class 10 · SSC | *Khaitan Public School, Ghaziabad* — Apr 2020
- Gold Medal, Technothlon (Techniche), IIT Guwahati — national-level analytical & logical reasoning championship.

CERTIFICATIONS

- The Bits and Bytes of Networking — Coursera (Google)
- Python Programming — Udemy
- Penetration Testing with Kali Linux — Udemy
- India Space Lab Certificate — Aerospace & Remote Sensing