SANIL GROVER

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EDUCATION

Thapar Institute of Engineering and Technology 2023 – 2027
B.Tech, Computer Science Engineering Patiala, Punjab
DPS Dwarka, New Delhi 2022
AISSCE (Class XII), Science Stream – 95.4% New Delhi

SKILLS

Cybersecurity: Malware Analysis, Reverse Engineering, Vulnerability Assessment, Network Security, Android Security, OSINT
Programming: Python, C++, C
AI & ML: PyTorch, OpenCV, Transformers, LLM Applications
Tools: Burp Suite, MobSF, VirusTotal, JADX, APKTool, Frida, Nmap, Nessus, Searchsploit, HTTP Toolkit, PCAPdroid
Other: MySQL, Firebase, AWS, Git

RESEARCH & PUBLICATIONS

- **Physics-Informed Digital Twin for Degradation Modeling and Remaining Useful Life Prediction in UAV Propulsion Systems** Presented at ICAAV 2026, DRDO

EXPERIENCE

Cloud Security Intern - eSecForte Technologies Jun '26 - Jul '26

- Contributed to 5+ cloud security assessment engagements, evaluating 20+ AWS resources to identify security misconfigurations, IAM and access-control weaknesses, and compliance gaps.

Security Intern - Indian Cyber Crime Coordination Centre, Ministry of Home Affairs Jun '25 - Aug '25

- Reverse engineered 30+ malicious Android APKs using MobSF, JADX, Frida, HTTP Toolkit, and PCAPdroid, uncovering payload droppers, persistence mechanisms, and C2 infrastructure disguised as legitimate apps.
- Discovered a dynamic USSD-based silent call-forwarding technique driven by a Firebase C2 channel; findings were presented in a technical review with Jio.
- Traced exposed Firebase databases and GitHub repositories distributing fraudulent APKs impersonating HDFC, SBI, Axis, IndusInd, and RBL, alerting 10+ victims and 5+ fraudsters; ran an authorized DoS assessment on the impersonated HDFC site, which went unresponsive and was later suspended by its host.

Summer Intern - Godfrey Phillips India Jun '24 - Jul '24

- Performed vulnerability assessments using Nmap and Nessus; completed PortSwigger Web Security Academy labs on SQL injection, SSRF, path traversal, and OS command injection.
- Completed AWS Cloud Practitioner coursework and gained hands-on exposure to enterprise networking (DHCP, subnetting, routing, firewall/proxy policies, NAT/PAT, VLANs), documenting remediation approaches with the security team.

PROJECTS

SecureAgent Python, LLMs

- Building a capstone project evaluating AI agent and tool-calling security against prompt injection and unsafe tool usage, exploring red-team attack simulation and policy enforcement.

Deepfake Detection using Temporal Vision Transformer PyTorch, OpenCV

- Built a video deepfake detection system using EfficientNet for spatial feature extraction and a Temporal Vision Transformer for sequence modeling. Achieved 96.08% accuracy on the evaluation dataset.

Society Operations Platform Flutter, Firebase – GitHub

- Built a residential society management platform for complaint tracking, visitor management, and worker coordination, with role-based workflows and complaint escalation flows. Piloting with 10 of 80 flats ahead of full rollout.

LEADERSHIP

OWASP TIET Chapter - Joint Secretary; Microsoft Learn Student Chapter

- Designed CTF challenges and co-managed an OWASP TIET CTF event with 1800+ registrations; hosted an offline cybersecurity workshop for 250+ students.
- Delivered a cybersecurity session at TechMeet 2024 (350+ attendees) and led a 10-member development team during Makethon 7.

ACHIEVEMENTS & CERTIFICATIONS

- AWS Certified Solutions Architect – Associate (SAA-C03) - Amazon Web Services Training and Certification.
- Letter of Appreciation - Roopa M, IPS, Indian Cyber Crime Coordination Centre (I4C), Ministry of Home Affairs.
- Ethical Hacker & Network Defense certifications - Cisco Networking Academy (NetAcad).