LAKSHIT VERMA

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SKILLS

Languages: Python, C, C++, JavaScript, TypeScript, Rust, Bash Scripting
Frameworks: React, Next.js, FastAPI, Node.js, Tailwind CSS, Flask, HTML, CSS
Technologies: MongoDB, REST API, Git, Docker, Makefile, GitHub Actions, Vercel, Cloudflare Workers, Railway
Security: Radare, IDA, Wireshark, Volatility, GDB, BurpSuite, Nmap, OWASP Top 10, MITRE ATT&CK

TECHNICAL EXPERIENCE

Student Software Developer at Mandiant
May 2026 - Present
Google Summer of Code — Remote

- Extending the malware string analysis project FLOSS to use the techniques in the experimental QuantumStrand branch.
- Implementing Cross-platform binary executable parsing with section-aware extraction of metadata important to malware analysts.
- Building a React GUI deployed to GitHub Pages capable of handling 100K+ string JSON files with no performance bottlenecks.
- Designing CI/CD for regular builds of 25+ open source libraries to keep string databases updated, replacing manual builds.

Security Engineer Intern
March 2026 - Present
NoHack Labs — Remote (Part-time)

- Delivered VAPT documentation for each application with extensive remediation guides for faster issue resolution.
- Conducted security assessments on 5+ applications, identifying vulnerabilities and testing real-world attack scenarios.
- Completed training in Web Exploitation and LLM-enabled Security through interactive labs on PortSwigger and picoCTF.

Undergraduate Researcher
September 2025 - Present
Dr. T.M.A. Pai Endowment Chair — Manipal, Karnataka, India

- Working under Senior Professor Dr. Manohara Pai and Schneider Electric on AI-enabled security analysis and test case generation.
- Built a novel framework via LLMs to automatically parse CVE, CWE and MITRE ATT&CK databases across 335K+ records.
- Automated binary analysis using Radare with exploit generation and sandboxed verification in controlled environments.

Student Software Developer at Dhwani RIS
May 2025 - August 2025
Code for GoodTech Dedicated Mentoring Program — Remote

- Developed a FastAPI-based backend to enable bulk conversion of Excel-based surveys to mForm compatible JSON files.
- Built an Angular frontend from scratch for real-time async Excel uploads, live previews and inline error reporting.
- Achieved batch processing of 10+ forms simultaneously supporting forms with up to 400 questions per upload.
- Created comprehensive testing and CI/CD pipelines, validating JSON and implementing error handling in frontend and backend.

Digital Forensics Subsystem Head
January 2024 - August 2026
Team Cryptonite - Major Student Project — Manipal, Karnataka, India

- Took part in 200+ Capture The Flag (CTF) cybersecurity contests leading to the team finishing 3rd nationally in 2024 and 2025.
- Supervised, created and tested 6 novel challenges in the fields of reverse engineering, malware analysis and digital forensics.
- Trained 11 Junior Members in digital forensics techniques, tools, and methodologies, enhancing the team's overall skill set.
- Held a guest lecture on incident response for Postgraduate students at MIT, sharing insights through a real-world case study.

ACHIEVEMENTS

- Awarded **1st Place** and 2,00,000 INR at the ISEA-ISAP 2026 Hackathon organized by IIT Madras.
- Awarded **1st Place** and 1,00,000 INR at Smart India Hackathon 2024 held at IIT Jammu.
- Awarded **1st Place** and 25,000 INR during the GITxIITB CTF by KLS GIT Belagavi and IIT Bombay Trust Lab.
- Awarded **2nd Place** and 10,000 INR through the Finova Club and the MAHE Innovation Centre's seminal Hackathon.

PROJECTS

moomer: Rust application for capturing and interactively viewing high-resolution screenshots on macOS. Provides a zoomable, pannable view of the captured screen, integrated via AppleScript to manage window transitions and restore previous apps.

NiteWatch: Digital Forensics tool for Linux filesystem recovery. Parses from raw bytes with no external libraries used, reconstructs B+ trees, and restores deleted files with full metadata. Uses PyQt GUI for visualizing inode structures and superblock parsing.

MFT Parser: Cross-platform C++ CLI for processing Windows artifacts with metadata extraction and deleted file recovery. Uses a portable CMake-based build system with recursive artifact detection.

InstaFuel Assistant: Specialized AI assistant for a Fitness brand that uses RAG architecture to fetch product listings relevant to user requirement. Deployed using Railway for backend and Qdrant as vector database.

EDUCATION

Manipal Institute of Technology, Manipal
July 2023 - August 2027
Bachelor of Technology in Electronics Engineering (Minor in Computing)

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