

# Rishi Kaul



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## Education

### Vellore Institute of Technology

B.Tech in Computer Science (GPA: 7.79 / 10.00)

Sept 2022 - May 2026

Bhopal, Madhya Pradesh

- **Relevant Coursework:** Data Structures and Algorithms (C++), Operating Systems, Database Management Systems, Computer Networks, Object-Oriented Programming (C++/Java)

## Technical Skills

**Languages:** Python, C++, Java, SQL, Bash

**Technologies:** Reactjs, Nextjs, Tailwind CSS(Daisy UI), Nodejs, Flask, Vercel, Docker, Trivy, Veracrypt, VirtualBox, Wireshark, Metasploit, Saleforces, AWS, Nmap, Burp Suite, MySQL, Raspberry Pi 3, PagerDuty

**Concepts:** Computer Networking, Quantum-resistant algorithms, Digital Forensics, Virtualization, API, Agentic AI, Cloud Computing

## Experience

### UL Solutions

Intern

April 2025 – June 2025

Remote

- Conducted comprehensive cybersecurity research on global trends, regional threats (India-specific), and emerging technologies, delivering actionable insights through data-driven reports and presentations.
- Analyzed and compared international cybersecurity frameworks (NIST, ISO 27001, UL standards), identifying key gaps and best practices to strengthen organizational security posture.
- Investigated real-world cyber threats and attack patterns, producing risk assessment summaries that informed strategic recommendations for threat mitigation.

### Pushkal Technologies

Developer Intern

Dec 2024 – Feb 2025

Remote

- Designed and implemented responsive user interfaces with Next.js, leading to a 15% improvement in user satisfaction scores.
- Collaborated with UI/UX designers and backend developers to enhance the usability of web applications and reducing post-release defects by 25%.
- Contributed to the adoption of API, AWS methodologies, improving team productivity by 15% through iterative development cycles.

## Projects

### BugOS | C, x86 Assembly, QEMU, Makefile, Git, FAT32, GDT/IDT

- Developed a monolithic OS kernel from scratch using x86 Assembly and C, implementing memory management and hardware interrupts for process isolation.
- Designed and implemented a FAT32 filesystem driver with disk I/O operations, achieving 25% faster read speeds than naive implementations.
- Built protected mode transition with GDT/IDT setup, debugging kernel panics using QEMU and GDB to improve system stability.

### ShieldNet | Python, Flask, SHA-512 Hashing, File Integrity Monitoring, Access Control, Event Logging

- Built a SHA-512 file integrity monitor with real-time alerts, reducing tampering risks by 42% via baseline comparison and logging.
- Built automated alerts and forensic logs to trace file tampering, cutting incident investigation time by 30%

## Achievements & Certifications

- Mountaineer on Saleforces (25+ badges)
- Top 100 in Anveshanam 24 CTF (IIT Jammu & DRDO)
- Bits and Bytes of Networking
- Introduction to Cybersecurity (Cisco)
- ICIP Certification
- Lean Six Sigma (White Belt)
- AWS and Salesforce courses (Ethnus)