

Kartik Jain

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Experience

R.U.D.R.A Cybersecurity, Security Engineer Intern

- Integrated and automated **BBOT** for external attack surface monitoring, reducing manual overhead and saving **\$20,000 annually**.
- Developed a custom **Semgrep module** for dynamic code analysis and visualized results via **Neo4J**.
- Discovered and reported **2 HIGH severity vulnerabilities** (LFI and Broken Access) in a banking client's web portal; performed manual code review and automated detection with Nuclei.
- Deployed and tested **Sliver C2** framework for purple team exercises to simulate real-world attack scenarios.

Cybersecurity Projects

Offensive Security

- Identified a **Privilege Escalation** vulnerability in **Meta's WhatsApp** platform.
- Reported and disclosed vulnerabilities in Microsoft platforms including **Intune** and **Exchange Admin**.
- Responsible disclosure of a **Stored XSS** in the **Mumbai Police** website in coordination with CERT-In.
- Reported critical vulnerabilities in **The Souled Store** (staging infrastructure exposure enabling full system compromise) and **Belgian Waffle Co.** (source code and credential leak allowing potential CRM takeover).

Defensive Security

- Hardened server infrastructure protecting data of over **16,000+ users**, mitigating critical threats.
- Prevented a ransomware breach by swiftly deploying a secure backup and recovery solution.
- Designed and deployed a **CTF challenge** using JavaScript and HTML for a cybersecurity event with **moderate difficulty**.

Technical Projects

- **mpstme.pics**: Designed a production-grade **photo-sharing platform backend** using **Node.js**, **Express**, **PostgreSQL**, **Drizzle ORM**, and **AWS S3**. Implemented secure upload policies, JWT authentication, role-based access (*superadmin*, *clubadmin*), and media proxy delivery with rate limiting. [\[Source\]](#)
- **Event Registration Platform**: Full-stack registration system for limited-seat events with **Cashfree payment integration**, automated email confirmations, QR-based ticket validation, admin-side analytics dashboard, and secure role-based authentication. [\[Source\]](#)
- **Production Backends for Event Apps**: Engineered scalable **FastAPI + PostgreSQL** backends and integrated them with **Flutter** applications for NMIMS events (*Taqneeq Fest*, *Mumbai MUN*). Implemented **referral systems**, **passwordless login**, **attendance tracking** and dynamic data synchronization between mobile clients and backend APIs, etc. [\[App 1\]](#) [\[App 2\]](#)
- **Certificate Automation & Verifier Portal**: Developed an automated platform for generating, emailing, and verifying event participation certificates. Supported dynamic text placement on templates, CSV-based batch generation, and secure public verification via unique hashes. [\[Source\]](#)
- **F1 Semicolon**: Built a real-time multiplayer quiz racing platform using **Node.js**, **WebSockets**, and **Redis**, featuring live leaderboards and synchronized gameplay across clients. Demonstrated expertise in concurrency and low-latency architecture. [\[Source\]](#)

Skills

Programming Languages: Python, TypeScript, Dart, C++ , Java

Backend & DevOps: Node.js, FastAPI, Flask, Express.js, PostgreSQL, Drizzle ORM, Docker, Nginx, Redis

Security & Tools: Burp Suite, Nmap, Semgrep, BBOT, Nuclei, Sliver C2, Wireshark, OWASP ZAP, Metasploit

Developer Utilities: Git, Postman, VS Code, Neo4J, MongoDB, Cashfree API, Linux (Ubuntu, Arch)

Other Interests: Discord Bots, Cloud Infrastructure, Event Automation, Music

Education & Leadership

- NMIMS - Mukesh Patel (Mumbai) BTech IT 2024-28, CGPA: 8.18/10
- Technical SuperCore at [ACM MPSTME](#) and technical head at [Taqneeq](#), [MumbaiMUN](#) by [Munsociety](#).