

Pratik Singh

+91 8260842250 | pratiksingh0@proton.me | github.com/pratiksingh94 | pratiksingh.xyz

SUMMARY

Security-minded developer who got into programming at 12 and never really stopped. I build things that sit at the intersection of development and security, from browser-based packet analyzers to understanding attacker infrastructure by building it myself. Comfortable owning Linux systems, setting up observability stacks, and thinking about web security from both the builder and attacker side. Looking to bring that background to a hands-on security role where there's real infrastructure to work with and things to actually fix.

EDUCATION

Fakir Mohan Higher Secondary School <i>12th Grade - 88%</i>	Balasure, OD <i>2024 - 2026</i>
Fakir Mohan University <i>Bachelor's in Computer Application with Research Hons.</i>	Balasure, OD <i>2026 - 2030</i>

PROJECTS

- Touka** | *React, TypeScript, Vite* github.com/pratiksingh94/touka
- Built a fully client-side network traffic analysis tool in the browser with zero external parsing libraries, wrote binary PCAP parsing, protocol dispatch, and dissectors for Ethernet, IP, TCP, UDP, ICMP, etc from scratch
 - Runs entirely in the browser with no server uploads so packet captures never leave the machine, useful for sensitive network analysis
- Mesh-C2** | *C, Python, Bash, Docker* github.com/pratiksingh94/mesh-c2
- Built a P2P mesh C2 framework to understand attacker infrastructure, implants gossip commands peer-to-peer so the network persists even if the central server is taken down
 - Designed a self-healing mesh topology where late-joining implants automatically sync peer lists and pending tasks without any central coordination
 - Shipped as a multi-component system across C, Python, and Bash with one-command install and startup scripts
- CSPLens** | *Next.js, TypeScript, Tailwind CSS* github.com/pratiksingh94/csplens
- Built a browser-based CSP analyser that grades policies, flags dangerous patterns like `unsafe-inline`, and maps the XSS attack surface per source expression
 - Designed the analysis engine using Unix philosophy where each stage is a single-responsibility function composed as `analyse(classify(parse(csp)))`, making the pipeline easy to test and extend
 - Shipped per-source risk classification with context-aware explanations, recommendations, and an interactive policy builder for constructing safer policies
- Rule Engine Playground** | *TypeScript, React, Vite* github.com/pratiksingh94/rule-engine-playground
- Built a mini rule engine supporting a natural `IF condition THEN action` DSL with operators like `BETWEEN`, `CONTAINS`, and compound `AND/OR` logic
 - Wrote a custom parser and evaluator in TypeScript for multi-rule execution against typed variable inputs, with `import/export` and a template library

SKILLS

Languages: TypeScript, JavaScript, C, Python, Bash
Security: Burp Suite, Wireshark, Nmap, UFW, fail2ban, SSH Hardening, Splunk
Observability: Grafana, Loki, Promtail, Prometheus
Web: React, Next.js, Node.js, Flask, Tailwind CSS
Tools: Git, Docker, Linux
Spoken: English, Hindi, Japanese (N5 – targeting N3)