Nisarga Adhikary

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Work Experience

Security, Threat Intelligence & OSINT Engineer June 2026 — Present
C3iHub, IIT Kanpur *Indian Institute of Technology Kanpur, India*

- Build a fully sovereign, on-premise LLM for cybersecurity, engineered for autonomous vulnerability assessment, white-box and black-box security testing, exploit analysis, and zero-day vulnerability discovery across complex systems.
- Conduct offensive security assessments, black-box application testing, and deep security research to identify complex vulnerabilities across critical systems before & after deployment.
- Build advanced OSINT and threat intelligence pipelines for attack surface management, threat hunting, infrastructure reconnaissance, and adversary tracking, transforming large-scale data into actionable intelligence.
- Develop internal security tooling and automation for reconnaissance, vulnerability discovery, and detection engineering while collaborating with engineering teams to harden infrastructure against sophisticated real-world attacks.

Software Engineering Intern Mar 2026 — May 2026
Wavelength (Antler '25) *Bangalore, India (On-site)*

- Strengthened backend security by fixing IDOR vulnerabilities, adding auth middleware, enforcing test token restrictions, and implementing sensitive data redaction to prevent unauthorized access
- Improved system reliability by introducing request tracing across services, automatic retries with exponential backoff, UUID-based idempotency, and CloudSQL compatibility
- Delivered product and performance improvements by shipping a new dashboard, adding AI guardrails against prompt injection and NSFW content, optimizing mobile performance, and improving error handling

Software Engineering Intern Aug 2025 — Sep 2025
Cypherock *Remote*

- Developed and deployed GenAI-driven tooling to streamline marketing workflows, increasing team throughput and reducing manual steps.
- Improved Core Web Vitals and optimized front-end performance, leading to measurable page speed and SEO improvements.
- Delivered targeted UX/performance changes that increased user satisfaction and reduced bounce on key landing pages.

Software Engineer Sep 2024 — Dec 2024
Skann *Remote*

- Built backend and frontend features for the Skann application, focusing on reliability and a smooth user experience.
- Scaled DevOps infrastructure to support growth and faster deployments.
- Conducted security audits and remediations across the codebase to harden the application.

Web Development Intern Jun 2023 — Aug 2023
New Delhi Space Society *New Delhi, India (Hybrid)*

- Contributed frontend work for the IIITD ESYA competition site—implemented designs from Figma and improved overall UX.
- Collaborated with designers and engineers to deliver responsive, accessible pages under tight deadlines.

Projects

Sightline github.com/ni5arga/sightline

- Built an OSINT search engine for discovering and mapping real-world infrastructure using OpenStreetMap data.
- Engineered high-performance geospatial search and querying for fast infrastructure reconnaissance at scale.
- Open-source project widely adopted by the OSINT community, earning 560+ GitHub stars.

Deanonymizer github.com/ni5arga/deanonymizer

- Engineered an OSINT intelligence platform that performs large-scale entity resolution, identity correlation, and digital footprint analysis by fusing heterogeneous public data sources into unified intelligence graphs.
- Built a high-performance reconnaissance pipeline for automated collection, normalization, enrichment, and cross-source correlation, enabling analysts to rapidly attribute online identities and uncover hidden relationships.

- Designed with a modular, extensible architecture supporting intelligence-driven workflows, scalable data processing, and advanced investigative use cases for cybersecurity, threat intelligence, and open-source investigations.

CHIP-8 Emulator github.com/ni5arga/chip8-emulator

- Implemented a **complete CHIP-8 virtual machine** in C++, **including CPU, memory, registers, stack, timers, and opcode decoding.**
- Built an instruction fetch–decode–execute cycle supporting all core CHIP-8 opcodes with correct timing and control flow.
- Implemented keyboard input handling and monochrome display rendering according to the CHIP-8 specification.

ModMail to Discord/Slack Sync github.com/ni5arga/modmail-to-discord-slack

- Developed a reliable webhook-forwarding system that syncs ModMail conversations to Discord and Slack in real time.
- Adopted by **500+ online communities** to centralize moderation workflows, reduce response latency, and improve team coordination.
- Implemented features such as ignore lists, role pings, outbound message controls, and private mod-note highlighting using structured embeds.

Other projects available on my GitHub: https://github.com/ni5arga

Security Research, Public Speaking & Open Source Contributions

- **Critical Infrastructure Security Research**: Led independent offensive security research against CBSE's (Central Board of Secondary Education) production examination infrastructure, identifying a chain of critical vulnerabilities capable of compromising privileged examiner accounts and enabling unauthorized modification of sensitive examination workflows at national scale affecting **millions** of students. The findings prompted coordinated remediation efforts and were featured by **BBC, Bloomberg, NDTV, India Today** and numerous international & national media outlets. More details about media mentions can be found here: https://ni5arga.com/press, write-up/detailed security report has been published here: https://ni5arga.com/blog/posts/hacking-cbse/.
- **Security Research & Responsible Disclosure**: Independently identified and responsibly disclosed multiple critical vulnerabilities across government platforms and venture-backed startups, including administrator account takeover, authentication and authorization bypasses, privilege escalation, insecure direct object references (IDOR), and large-scale PII exposure. Worked directly with engineering teams and security stakeholders to validate findings, coordinate remediation, and strengthen production systems before public disclosure.
- **CVE Credits**: Vulnerability research credited across multiple CVEs in a national-scale multi-tenant ERP platform, disclosed via CERT-In — CVE-2026-84147, an unrestricted file upload flaw enabling Remote Code Execution (CVSS 10.0, Critical); CVE-2026-84148, an IDOR / authorization bypass exposing user data (CVSS 9.2); and CVE-2026-84149, an exposed Git directory allowing full backend source code reconstruction (CVSS 9.2). More in the pipeline.
- **FOSS United**: Worked on the FOSS United Platform which is based on the Frappe framework. My pull requests can be seen here: https://github.com/fossunited/fossunited/pulls?q=is%3Apr+author%3Ani5arga+is%3Aclosed. Also reported several security vulnerabilities (https://ni5arga.com/blog/posts/finding-vulnerabilities-in-fossunited/).
- **Reddit**: Contributed to Reddit's developer platform. Pull request: https://github.com/reddit/devvit/pull/157

Skills

- **Programming Languages**: JavaScript, TypeScript, Rust, Python, C/C++, Java, Bash, Dart/Flutter, HTML/CSS
- **Frameworks & Tools**: React, Svelte, Astro, Tailwind CSS, Node.js, Express, SQL/NoSQL (MongoDB), Docker, Kubernetes, Git, NGINX, Caddy
- **Cybersecurity**: Offensive Security, Application Security (Web/API), Vulnerability Research, Threat Intelligence, OSINT, Attack Surface Management (ASM), Threat Hunting, Secure Code Review, Authentication & Authorization Testing, Business Logic Testing, API Security, IDOR & Access Control Analysis, Reconnaissance Automation, Detection Engineering, MITRE ATT&CK, Burp Suite, Nmap, ffuf, Nuclei, Metasploit, Wireshark, Ghidra
- **Operating Systems**: Linux (Arch, Debian, Ubuntu, Kali), macOS, Windows, Android, Embedded Linux; Proficient with Linux internals, system administration, networking, shell scripting, virtualization (Docker/UTM), and CLI-based development workflows.
- **DevOps & Infra**: GitHub Actions, Fly.io, DigitalOcean, GCP, CI/CD, Railway, Heroku
- **Database & ORMS**: MongoDB, SQLite, Firebase, MySQL, Postgres, Drizzle, Prisma