

Kunal Singh

Software Engineer

📍 Bhopal, India | 📞 +91 90398 80309 | ✉️ pykunalsingh@gmail.com
🌐 github.com/KunalSin9h | 🌐 knl.co.in | 🔗 linkedin.com/in/KunalSin9h

Experience

SafeDep, Inc. · Software Engineer

May 2025 – Present

- Built and operate the backend and cloud infrastructure behind a production **Threat Intelligence Platform** used by downstream products and customers.
- Designed the platform's core data model and persistence layer, including entity lifecycle and relationship modeling.
- Engineered event-driven ingestion pipelines with serialized processing and fault isolation, so one malformed event can't stall the system.
- Built operator tooling and a **CLI** for managing and publishing platform data.
- Developed an **eBPF-based Dynamic Malware Analyzer** and an **Agentic AI Malware Analyzer**; operate **Hermes Agent** for agentic workflows and AI-assisted development.
- Contribute to and maintain open-source security software, including SafeDep **vet** (**40K+ downloads**).

SafeDep, Inc. · Software Engineer Intern

Mar 2025 – Apr 2025

- Contributed to SafeDep's open-source security tooling, including **vet**, and implemented reusable GitLab CI/CD Components.
- Researched dynamic analysis techniques using **eBPF**, **Docker**, and **CNCF Falco**.

Blupp Co. · Backend Developer Intern

Jun 2024 – Jul 2024

- Built serverless applications using **Cloudflare Workers**, JavaScript, TypeScript, Go, Node.js, and **PlanetScale**.
- Developed Go backend services for high-throughput workloads.

Open Source & Selected Projects

OpenSSF (Linux Foundation) · Open Source Contributor

github.com/ossf/malicious-packages

- 2nd highest contributor** to the OpenSSF malicious-packages repository.
- Analyze suspicious open-source packages through static and dynamic code analysis, and publish reproducible findings as OSV security advisories.

Melt-CD · Continuous Delivery Platform

github.com/kunalsin9h/meltcd

Go, TypeScript, React, Docker, Docker Swarm, GitHub Actions

- Built a continuous delivery platform for Docker Swarm with a GitOps workflow.
- Architected the Go API server, CLI, and React admin interface as a lightweight alternative for teams running Docker Swarm.

Technical Skills

Languages	Go, TypeScript, JavaScript, Python, C/C++
Cloud & Infra	Cloudflare Workers, Docker, Docker Swarm, Linux, Nginx, CI/CD, GitHub Actions, GitLab CI/CD, Azure VMs
AI/ML & Systems	Machine Learning, Deep Learning, AI agents, agentic workflows, LLM tool use, Anthropic SDKs, DeepEval, OpenRouter, Langflow, eBPF
Databases & Data	PostgreSQL, SQL, MongoDB, Redis
Developer Tools	Git, GitHub, Docker, Testing

Research & Talks

- Research Paper:** *Personal Network Password Manager & Secret Directory on top of WireGuard® VPN.*
- Speaker,** OWASP AppSec Days Bengaluru (Oct 2025): *"eBPF-based Dynamic Malware Analyzer Architecture".*

Education

Rajiv Gandhi Proudlyogiki Vishwavidyalaya, Bhopal, MP
B.Tech. in Computer Science & Engineering | CGPA: 8.26 / 10

Nov 2021 – May 2025