

# VED RATAN

## Software Engineer

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### SUMMARY

Seasoned **SWE** experienced developing applications, databases and cloud native solutions. Smart professional with proven troubleshooting and debugging capabilities for resolving complex technical issues.

### EXPERIENCE

#### Software Engineer

##### Nirmata

10/2024 - 03/2025

Nirmata is a software company specializing in Kubernetes management and security solutions

- Collaborated with the server-side team to deliver a customized private edition of Nirmata's SaaS platform for a high-value enterprise customer.
- Enhanced security and scalability by implementing **multi-architecture** (multiarch) image support via **GitHub Actions**. Increasing deployment scope for **50% customers**.
- Expanded **vulnerability scanning** coverage across **10+** internal repositories and streamlined alerting by migrating notifications to a dedicated Slack channel, driving proactive remediation of critical CVEs, cutting down manual **intervention by 80%**.
- Designed and implemented a repository scanning feature in nctl (Nirmata's CLI tool), enabling users to scan both **private and public repositories** against Kyverno policies for compliance and security. Expanded platform compatibility by adding support for **GitLab, Bitbucket, and custom domains**. Optimized performance, reducing scan time by **83% (from 2 minutes to 20 seconds)**, significantly improving developer productivity.

#### SWE Intern

##### Nirmata

04/2024 - 10/2024

Nirmata is a software company specializing in Kubernetes management and security solutions

- Designed and implemented a Helm chart for **streamlined SaaS deployment**, replacing manual YAML configurations. Enhanced **compatibility for on-prem** environments and modified cluster onboarding via Nirmata's CLI (nctl) for seamless integration.
- Built an offline cluster scanning feature in Nirmata's CLI, enabling users to validate security policies locally without requiring SaaS onboarding—enhancing privacy and flexibility for air-gapped environments.

#### SWE Intern

##### AccuKnox

10/2023 - 04/2024

AccuKnox is a security company focusing on Kubernetes native security solutions

- Enhanced Nimbus (an intent-based security platform) by integrating a **Kubernetes adapter** powered by **Kyverno**, extending **5G security** capabilities increasing threat detection scope by **5X** while ensuring real-time compliance
- Authored **6+ security intents** for 5G blueprints, mitigating **10+ attack vectors**.
- Automated native policy generation **reduced remediation time by 65%**, hardening 5G network security.

#### Linux Foundation Mentorship LFX'23 Contributor

##### Kyverno

06/2023 - 08/2023

Kyverno is an open-source policy engine designed for Kubernetes

- Built a **Kubernetes controller** to auto-delete labeled resources on schedule, **reducing infrastructure costs** by eliminating resource wastage.
- Scaled Kubernetes controller to handle **2,000+ resources concurrently**, ensuring high performance in production environments.
- Utilized Golang for **concurrent implementation**, ensuring **thread safety**, applying design patterns, and preventing **resource leakage**.

### SKILLS

C/C++	Docker	GitHub	Golang
Java	Kubernetes	Linux	MongoDB
OOP	SpringBoot	GitHub Actions	
SQLite			

### PROJECTS

#### Appxposer

Appxposer project involves creating a Kubernetes controller for application exposure

- Developed a **Kubernetes controller** to **automate** external exposure of newly deployed apps, accelerating **service availability**.
- The **controller** can dynamically manages **ingress resources** by automatically creating/deleting them in sync with deployment lifecycles.

### EDUCATION

#### Bachelor of Technology

Indian Institute of Information Technology(IIT), Gwalior

08/2020 - 05/2024

Madhya Pradesh, India

GPA

7.2 / 10

### TRAINING / COURSES

#### Bachelor of Technology - Computer Science and Engineering

Information Security Systems, Data Structures and Algorithms, Database Management Systems, OOP in C++, Computer Networking, Software Engineering, Cloud Computing, Operating Systems, Machine Learning, Neuro-computing Architecture

### LANGUAGES

Golang	Proficient	<div><div></div><div></div><div></div><div></div><div></div></div>
C/C++	Advanced	<div><div></div><div></div><div></div><div></div><div></div></div>
Java	Advanced	<div><div></div><div></div><div></div><div></div><div></div></div>