Harshit **Luthra**

Infrastructure Lead · Security Analyst

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"A tinkerer with a curious mind"

Sum**mary**

Ingrained **Cost-conscious** mind who strives to work with velocity. Recognized for pioneering and architecting solutions that scaled to **4M DAU with 99.999% SLA at 10% of revenue** for infrastructure costs. Adept **troubleshooter**, specializing in resolving intricate issues related to **networking**, **databases**, **storage**, **serverless** components, and cloud VMs.. Well-versed in building and fostering solid relationships with stakeholders to attain project completion and delivery within time and budgetary restraints.

Exp**erience**

Primetrace (Kutumb Crafto)   *India*

Infrastructure Lead (**Founding Engineer**)   *Feb. 2021 - Present*

Created Infrastructure from scratch on **AWS** on self-hosted K8s that reached scale of **4M DAU** and a peak load of **1M RPM**, Utilised **RED and USE methodologies** for efficient issue detection and resolution. Leveraged cutting-edge technologies, including **Prometheus, Grafana, Elastic-APM, Pyroscope, Loki, and Robusta**, to ensure seamless system oversight.

- Reduced cloud bills by **200k\$/yr** with **Self-hosting**, **Binpacking** pods and nodes, Spot nodes, Network **flow logs** check, Log and metrics volume in check.
- Setup and Maintained Multi-broker **Apache Kafka**, and multi-node **ELK** Stack on spot instances.
- Implemented robust network policies and role-based access control (RBAC) configurations, enhancing the security posture of the **Kubernetes cluster** and reducing potential attack vectors.
- Reduced deployment times to under one minute by using caching with Self-hosted **GitHub-Runners** on Spot using **ArgoCD**, and **Devtron**.
- Implemented **Ipv6** Support on the whole infrastructure
- Added **Global Accelerator** to reduce latencies in global markets
- Employed and maintained **OpenVPN** within **Kubernetes cluster**, simplifying networking between on-cluster services and development machines.
- Maintained **99.99% uptime** by running stateless workloads on **95% spot instances**, implementing time-based scaling, and utilizing node hibernation during periods of reduced traffic.
- Spearheaded integration of comprehensive monitoring stack, encompassing centralized monitoring, Application Performance Monitoring (APM), logging, profiling, and alerting.

smallcase   *India*

DevOps Engineer   *Feb. 2019 - Sep. 2020*

Ensured smooth operations of essential infrastructure components, including **OpenVPN**, **Heartbeat**, **Elastalert**, and **Grafana**. Managed and integrated various open-source tools, such as **Wiki.js**, **Sentry**, and JFrog Artifactory to support diverse project requirements. Developed and maintained **Ansible** scripts to automate deployments of infrastructure tools, including log rotation, backup scripts, and td-agent. Restructured CI/CD pipelines within **Jenkins** and **CodeDeploy** to optimise deployment workflows. Established instance status check alarms to monitor system health and **SES** alarms. Oversaw WordPress (WP) blogs by executing migrations and automated backup solutions.

- Reduced infrastructure expenses to a mere **10% of previous costs** by leading cost optimisation initiative.
- Implemented **Haproxy** to improve network performance, resulting in faster and more efficient data transmission.
- Streamlined development processes by adding open-source tools like **Elastic-APM**, **Kafka-manager**, and **Kafka-topics-ui** to infrastructure.
- Enhanced data processing capabilities by establishing robust multi-broker Apache Kafka system and multi-node ELK Stack on spot instances.

Udacity
Project Reviewer-Student Mentor

India

Apr. 2018 - Present

Mentored students through the Android & Python Development course and reviewed project submissions.

Utopian.io

Italy

Bug Hunting Community Manager

Jun. 2018 - Present

Review Bugs for many open source projects under the hood of Utopian.io

Skills

Programming	C, C++, Java, Python, Kotlin, Bash, Go, Rust, Nodejs
DevOps	Linux, Docker, Ansible, Kubernetes, Terraform, CloudFormation, Karpenter, ArgoCD, ArgoWF, Kubeflow, Coroot, Prometheus, Loki, Grafana,Victoria-Metrics, Pyroscope, Tempo, Elasticsearch, MySQL, PostgreSQL, Kustomize, Meshery, Vegeta, ELK, AWS, Azure, GCP, Jenkins
Utilities	Vim, Git, Android Studio, Gradle, Wireshark, binwalk, tcpdump, netcat, telnet

Education

Chitkara University

Punjab, India

B.E. in Computer Science and Engineering

Jul. 2016 - 2020

9.29 CGPA with specialization in Cyber-Security

Honors & Awards

Hackathons

2024	**Winner**, 2x AWS-Gameday: Security, Resilience	*Bangalore*
2023	**Runner up**, AWS-Gameday: Microservices	*Bangalore*
2018	**Winner**, MSHacks 2.0 - Microsoft Hackathon	*LPU, Jalandhar*
2018	**Runners Up**, Octahacks	*Chandigarh*
2018	**Winner**, Code Breakers	*CSI Chandigarh*
2018	**Runners Up**, SAP Next-Gen Hackathon	*Chandigarh*
2017	**Runners Up**, Codex C++	*CSI Punjab*

Certificates

Kubernetes

Linux Foundation

June 2023 - June 2025

- CKS: Certified Kubernetes Security Specialist 2023 LF-fty09fzmce
- CKA: Certified Kubernetes Administrator 2024 LF-bl5pcg30qm
- CKA: Certified Kubernetes Administrator 2021 LF-4j07bu8tsj

AWS

Associate Solutions Architect - Certification

Aug. 2019 - Aug 2024

- License no K71S1HB13NBEQT5N

Udacity

India

Nanodegrees

2018

- Android Basics Nanodegree
- Intro to Data Structures Nanodegree
- Python Foundation Nanodegree
- Intro to Programming Nanodegree