

# Nakshatra Maheshwari

Staff Engineer – Team Lead - Zomato, ex- Tower Research, ex- Arista Networks

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Team Lead with 7+ years of experience in software development and management. Seeking a challenging role that leverages my skills in product and platform engineering, where I can work with cutting-edge technologies, contribute to system design and optimization, and have the opportunity to mentor others while driving cost savings.

## Work Experience

### Zomato India Pvt. Ltd.

**Staff Engineer - EM (July 2022 – Present)**

**Software Developer 3 - TL (Apr 2021 – June 2022)**

**Software Developer 2 (Oct 2019 – Mar 2021)**

- As a part of the SRE team, I am leading a team of 8+ members.
- Designed and implemented a service mesh infrastructure using Envoy and Kuma, including porting service-to-service communication, conducting load testing, providing training, and leading a team for canary deployments.
- Developed in-house high-availability monitoring systems using Prometheus and Grafana, resulting in improved incident response times, increased system availability.
- Managed and optimized AWS costs using AWS capacity provider and Golang garbage collector, resulting in a 35% cost savings in EC2 instances usage.
- Replaced Spotinst with an in-house tool utilizing AWS ECS capacity provider, leading to a 25% reduction in computing costs.
- Implemented GitOps methodology for managing various configurations for Prometheus, Kafka, etc, reducing manual errors and improving efficiency.

### Tower Research Capital LLC

**Software Developer 2 (Apr 2019 – Sept 2019)**

- Setup Google Kubernetes Engine (GKE) and moved a major part of the workload to it.
- Created a Proof of Concept for a Server-Subscription based model to automate the QA pipeline, addressing the challenge of hardware-specific NIC dependencies without relying on Kubernetes and its added operators.

### Arista Networks Pvt. Ltd.

**Team lead (SDE) (Jan 2019 - Apr 2019)**

**Software Developer Engineer (Jun 2016 - Dec 2018)**

**Software Developer Intern (Jan 2016 - Jun 2016)**

- Acted as a key interface for Simulated test infrastructure, developing a C tool using Linux cgroups for resource tracing and sandbox testing. The tool resulted in a 50X increase in server productivity, addressed the long-running OOM problem, and introduced resource capping to control completion time inconsistency and unknown timeouts in tests.
- Led the redesign and migration of the traditional Python-based infrastructure codebase to Golang.
- Successfully executed a Proof of Concept to address the long-running GCC virtual memory exhaustion issue in 32-bit Arista operating systems, with the assistance of one overseas intern.
- Implemented Kubernetes for container orchestration, including automated deployment, scaling, and operations, while developing Ansible playbooks for cluster state preservation and new cluster configuration, and migrating internal services for improved CI/CD processes.
- Developed a customizable golang health check tool for internal services, providing combined status of multiple endpoints (HTTP/TCP) with graphical representation on a newly created status page.

## Education

### Indian Institute of Information Technology, Allahabad (IIIT-A)

**(2012 – 2016)**

- Bachelor of Technology (Hons) - IT
- CGPA – 8.75

## Skills

- Programming Languages: C | C++ | Python | golang
- Specialized in: Docker | Kubernetes | Linux cgroups
- Wide experience in Linux.
- Cloud platforms: AWS | Google cloud
- Automation Tools: Terraform | Ansible
- Monitoring Tools: Prometheus | Grafana
- Service mesh: Envoy | Kuma
- Data stores: MySQL | Dynamodb | Redis

## Achievements

- I received the honor of having a new peer bonus category named "Being Nakshatra" at Arista Networks. This category was defined by the company's CTO, *Ken Duda*, due to my exceptional performance in resolving multiple production issues, resulting in receiving multiple peer bonuses in a single quarter. This achievement was unprecedented in Arista's history. [\[link\]](#)
- Organized an Arista-U session (Arista talk) aimed at assisting developers in integrating their development workflow with Docker and deploying their services in the cluster.
- Organized a Zomato Tech talk focused on enlightening developers about the importance of Observability in achieving faster incident response times.
- I helped Zomato achieve a 25% reduction in infrastructure compute costs by replacing the use of Spotinst with our in-house tool.
- I successfully reduced Zomato's observability cost from \$170k to \$30k by personally spearheading the migration. By moving away from Grafana Cloud and New Relic infrastructure metrics, I implemented an in-house high-availability setup of Grafana and Prometheus.
- ACM ICPC regional selected Amritapuri Site-2013-2014