

# SARANG NAGPAL

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## Summary

Results-oriented Software Engineer with experience building high-throughput systems in Java and Go, leading resilience testing initiatives, and contributing to security-focused release cycles. Skilled in building applications with scalable architecture, cloud-native systems and distributed data systems with DevOps practices. Adept at system design and implementing resilient architectures that handle millions of transactions seamlessly. Experienced in working within agile teams to deliver impactful, high-quality solutions.

## Experience

### Software Engineer

[Visa Inc](#)

April 2025 – Present  
Bangalore, India

- Implemented a **token bucket-based rate limiter** in a high-performance **Go-based load generator**, enabling control of stress test throughput at **60K+ TPS**, more than 5 Billion Transactions per day, improving test predictability and system observability while working towards **6 9's of availability SLA**
- Implemented **multiple automated production releases**, addressing critical **security vulnerabilities**, reducing overall CVE exposure across customer-facing services and saving countless dev hours.
- Initiated and established foundational practices for **chaos engineering** in AI inference services, focusing on fault injection, latency simulation, resource exhaustion and stale context scenarios to improve model resilience.
- Designed and Implemented single point control plane application for **on premises, Cloud and Kubernetes** based services to manage auto scaling and chaos testing scenarios across production environments.
- Collaborated cross-functionally to develop monitoring metrics and dashboards to measure impact of chaos tests and rate-limiting logic on the distributed AI model inferencing system.

### Software Development Engineer

[Amazon](#)

Jan 2024 - Mar 2025  
Bangalore, India

- Collaborated in a team to implement Features in **Scalable Architecture** to optimize customer onboarding, reducing number of customers clicks by **50%**, improving overall issuance metrics by **8%** and reducing latency.
- Improved Payment Success Rate by **5%** by Implementing Strategies to improve resiliency of **UPI Payments** for more than **20 million** Customers
- Resolved Numerous Business papercuts and developer backlog queue items implementing **RESTful APIs** using **Java** and multiple AWS Components like **AWS Lambda, DynamoDB, SQS, SNS, etc.**
- Designed and developed systems solving business problems while upgrading the frontend framework to build interactive web pages for mobile from **JSP** to **ReactJs** with **Redux**.

### Software Development Engineer Intern

[Amazon](#)

May 22 – July 22  
Bangalore, India

- Built a back-end service in Spring Boot (Java) to test the resilience of Amazon Pay's core UPI service while working in an Agile Environment
- Achieved a 100% score in resilience metric for the core service by configuring stress tests in a custom stress testing framework

## Skills

**Programming Languages:** Java, Python, C++, Go

**Frameworks:** Spring Boot, JSP, Kubernetes

**Cloud Platforms & Tools:** AWS (Lambda, S3, DynamoDB, API Gateway), RabbitMQ, Kafka, MongoDB

**Backend Technologies:** RESTful APIs, Microservices Architecture, Asynchronous Communication, MySQL

**Additional Skills:** System Design, Scalable Architecture, Agile Methodologies

## Education

### National Institute of Technology, Warangal (NITW)

Bachelor's of Technology, Electronics and Communication Engineering

2019 - 2023

Warangal, India