

# Gagandeep Singh

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## Work Experience

### Staff Software Engineer, LocoNav India Private Limited (Hybrid)

Dec 2020 - Present

- Fastag Product
  - Led the formation and growth of a high performing team orchestrating end-to-end development of the product
  - Successfully scaled the system from inception to handle 2.6Cr daily transaction (2% of India's total toll volume).
  - Executed multiple iterations on internal products and implemented workflows, resulting in a remarkable 40% bandwidth optimization.
  - Pioneered the transition of critical components to a microservices architecture, achieving a 75% speedup in the five slowest endpoints.
  - Seamlessly managed complete data transition during the product acquisition phase, ensuring a smooth integration process.
- Git branching and release automation
  - Implemented release strategy for daily release of monolith app worked by 40 devs. Subsequently automated it to eliminate dev intervention.
- Code and infrastructure refactoring for background cluster
  - Strategically reduced from 70+ to 5 queues based on latency/memory requirements, optimizing approximately 25% of infra costs.
- Optimizing workflows for internal business teams
  - Brainstormed processes for the ground operations team to build custom workflows & automations, optimizing bandwidth > 30%.
  - Driving similar efforts for dispatch & warehouse teams to optimize the overall ground support work done by LocoNav.
- System upgrades and cloud cost optimizations
  - Solely executed a major framework upgrade and spearheaded subsequent changes for further upgrades in the monolithic app.
  - Successfully completed two major and one minor version database (Postgres) upgrades.
  - Took charge of a cost reduction initiative alongside the DevOps team, resulting in a substantial 25% reduction in cloud costs.

### Member of Technical Staff, LocoNav India Private Limited (Gurgaon Onsite / Hybrid)

Feb 2018 - Nov 2020

- Planned and executed refactoring of core system entities, streamlining the access over 200+ reports and APIs.
- Improved query performance and added caching to reduce database load by 10%.
- Engineered a robust API layer for mobile applications, catering to over 80% of the total website traffic.
- Designed a scalable and multilingual backend system to seamlessly handle 10 million daily push notifications.
- Implemented in-app notifications and blocking banners to drive renewal and marketing initiatives.
- Integrated Razorpay payment links to drive renewals during COVID, collecting 3.7L in the first month, 3.2Cr annually.
- Efficiently migrated ~ 150 different kinds of emails from Sparkpost to Amazon SES implementing bounce handling for increased reliability.
- Worked as a devops to:
  - Setup the first jenkins for the organization to streamline deployments.
  - Transitioned from a single EC2 machine to load balancer based reliable architecture to meet the expanding user base.
  - Configured critical infra components like VPC, subnets, security groups. Introduced private hosted zones and Lambda automations.
  - Handled AWS EC2 reservations and saving plans based on current usage and future projections.

### Sr. Software Developer, JTG E-Business Software Pvt Ltd (Gurgaon, Haryana)

Oct 2016 - Feb 2018

- Led a collaborative effort within a 4-member team, overseeing the work of 2 developers for the Uptime Cloud Monitor Project.
- Successfully implemented comprehensive monitoring solutions for Azure cloud products, enhancing the product offering.
- Strategically planned and migrated infrastructure from AWS EC2 Classic to AWS VPC in a phased manner.
- Worked on the android app and resolved bugs in the "Issues" feature.

### Software Developer, JTG E-Business Software Pvt Ltd (Gurgaon, Haryana)

Jun 2015 - Oct 2016

- Played a pivotal role in the Uptime Cloud Monitor project, actively addressing and resolving various small features and bugs.
- Enhanced the Box collector tool written in C, by configuring it to intelligently ignore docker network interfaces.
- Diligently documented critical subsystems, providing comprehensive insights for team members and stakeholders.
- Strengthened Redis security after ransomware attack on AWS and Linode servers.

## Skills

**Language / Framework / Datastores:** Ruby, Rails, Java, Postgres, Redis, Kafka, HTML, CSS, Javascript, JQuery

**Cloud / Servers / Containerization:** Amazon Web Services (AWS), Ubuntu, MacOS, Nginx, Docker, Docker-Compose, Kubernetes

**Observability / Collaboration:** Prometheus, Grafana, Datadog, NewRelic, Bugsnag, ELK, JIRA, Confluence, Slack, Github

**Team Skills:** Team management, Stakeholder management, Setting team direction

## Education

Bachelor of Technology (CSE), GTBIT

GGSIU, New Delhi

2011 - 2015

AISSC, GHPS Vasant Vihar

CBSE, New Delhi

2010 - 2011

SSC, GHPS Vasant Vihar

CBSE, New Delhi

2008 - 2009