

# Gagandeep Singh

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## Work Experience

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

Dec 2020 - Present

- Fastag Product
  - Built a team and scaled the product from scratch to handle 2.6Cr daily transaction (2% of India's total volume).
  - Performed several rounds of iterations to internal products and built custom workflows to optimize internal team's bandwidth by 40%.
  - Transitioned parts of the system to microservice to speedup 5 slowest endpoints by more than 75%.
  - Owned complete data transition during product acquisition phase.
- Git branching and release automation
  - Implemented release strategy for daily release of monolith app worked by 40 devs. Later automated it to eliminate dev intervention.
- Code and infrastructure refactoring for background cluster
  - Refactored from 70+ queues to 5 queues based on latency/memory requirements, effectively eliminating ~ 25% of infrastructure cost.
- Optimizing workflows for internal business teams
  - Brainstormed processes for the ground operations team to build custom workflows & automations, optimizing bandwidth > 30%.
  - Presently optimizing the same for dispatch & procurement teams.
- System upgrades and cloud cost optimizations
  - Single handedly performed one major framework upgrade and spearheading changes for further upgrades for the monolith app.
  - Performed two major and one minor database upgrades using multiple strategies.
  - Managed cost reduction activity in late 2022 with Devops team saving close to 25%.

### Member of Technical Staff, LocoNav India Private Limited (Gurgaon, Haryana)

Feb 2018 - Nov 2020

- Refactored core system entities to simplify their access around 200+ reports and APIs.
- Improved query performance and added caching to reduce database load by 10%.
- Developed API layer for mobile applications, serving more than 80% of total website traffic.
- Engineered scalable & multilingual backend for handling ~ 10million daily push notifications.
- Implemented in-app notifications and blocking banners to drive renewal and marketing initiatives.
- Integrated payment links to drive renewals during COVID, collecting 3.7L in the first month, 3.2Cr annually.
- Slowly moved ~ 150 kinds of emails from Sparkpost to Amazon SES for emails with bounce handling setup.
- Worked as a devops to setup a lot of initial things:
  - Setup first jenkins for the organization and moved deployments.
  - Transitioned from a single EC2 machine to a reliable architecture, catering the growing user base.
  - Created VPC, subnets, security groups, introduced private hosted zones and Lambda automations.
  - Handled AWS EC2 reservations based on current usage and future projections.

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

Oct 2016 - Feb 2018

- Worked on the Uptime Cloud monitor Project in a team of 4, supervising 2 developers.
- Integrated monitoring of Azure cloud products.
- Planned and moved infrastructure from Classic EC2 to 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

- Worked on the Uptime Cloud monitor project and solved various small features and bug fixes.
- Improved the box collector tool (written in C) to ignore docker network interfaces.
- Documented various critical subsystems and scaled down multiple systems.
- Hardened Redis security after a compromise activity on AWS and Linode servers.

## Skills

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

**Cloud / Servers / Ops:** Amazon Web Services (AWS), Ubuntu, MacOS, Nginx, Docker, docker-compose, Kubernetes

**Platforms / Tools:** Prometheus, Grafana, Datadog, NewRelic, JIRA, Confluence, Github, Bugsnag, ELK

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

## Education

Bachelor of Technology (CSE), GTBIT

GGSIPU, New Delhi

2011 - 2015

AISSC, GHPS Vasant Vihar

CBSE, New Delhi

2010 - 2011

SSC, GHPS Vasant Vihar

CBSE, New Delhi

2008 - 2009