

SAURAV KUMAR

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Experience

BrowserStack

Mumbai

Senior Software Engineer

April 2022 - Present

- Developed a centralized data **archival pipeline** tailored to various BrowserStack product subscription types, featuring a data recovery option. Implemented a cron job to archive **5GB** of production database data daily, ensuring minimal impact. Additionally, created a separate cron job to monitor changes in user subscription plans and store them in **Redis** for quick lookup and further updating DB.
- Orchestrated the transition of a core service from a monolithic structure to a separate **microservice** with no downtime. This led to a **50%** reduction in API latency of **400K req/hr** for allocation, deallocation, and cleanup of **20k** terminals. It also helped improve engineers' development experience as we got positive feedback.
- Created a **Kubernetes** CI/CD infrastructure for **microservices** on **EKS** using **Ansible, FluxCD, and Jenkins**, starting from the ground up. Later on implemented **ArgoCD** quick revert and rollback.
- Employed AWS Data Migration Service to efficiently migrate a **PostgreSQL** database of approximately **190GB** to **MySQL** in a live production environment, achieving minimal downtime of just 1 minute. Additionally, optimized DMS performance to manage DB load during the process.
- Played a key role in developing a pipeline for storing customer test data in a central data platform (**1TB**) using **REST** API and **Kafka** ingestion. Enhanced database query performance to manage a load of **2.5K queries per second (QPS)** after doing in-depth research in MySQL innodb engine.

BrowserStack

Mumbai

Software Engineer

Aug 2020 - March 2022

- Member of the SpeedLab team, a tool designed to provide performance insights for websites across mobile and desktop browsers. Skill involved **Nodejs, Ruby, Bash** and **Swift**.
- Reduced mobile device session error rates from **40% to 3%** by addressing various issues related to **ADB**, device stability, and optimizing our use of **open-source** tools like SiteSpeed and Google's Lighthouse by contributing to same.
- Created a workflow on iOS devices to activate the Paint Timing API before running Speedlab sessions using the XCUItest framework in Swift language. This implementation addressed a highly requested customer feature, leading to a **20% increase in Speedlab** sessions on iOS.
- Successfully single-handedly integrated LaunchDarkly (a feature flag system) into our system, widely adopted by developers due to its robust design, including a fallback mechanism and cost-effectiveness, avoiding single points of failure. Currently our LaunchDarkly architecture is resolving flags at over **7K req/sec**.

Relevant Skills

Tech Stack:

Java, Nodejs, Ruby on Rails, JavaScript, SQL, Ansible, Nginx, Kafka

Tools:

Docker, Redis, Kubernetes, Jenkins, AWS (EC2, EKS, S3, Route53, AuroraDB, DMS)

Proficiency:

Rest APIs, Microservices, CI/CD pipelines, Database Management

Interests:

Backend development, DevOps, Distributed System

Projects

GoDrive

[github/goDrive](https://github.com/svkrclg/goDrive)

- A command line tool to upload files to user's Google drive account using google **OAuth2.0** for authenticating users and getting auth code built using **Java, maven** and **Javascript**.
- Standalone server hosted on **Heroku** to get access and refresh token using the auth code of the user.

Education

Army Institute of Technology

Bachelor of Technology - GPA: 8.9

Pune

July 2016 - June 2020