Saurav Kumar

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Experience

BrowserStack Mumbai

Senior Software Engineer

April 2022 - Present

• 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 innobDB 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.
- Conducted a Proof of Concept (PoC) on re-runs within the iOS Safari browser to optimize performance metrics. Developed three solutions and ultimately implemented a local Selenium session using Safari drivers to achieve faster re-runs, reducing session times from 90 seconds to **30 seconds** for three consecutive runs.
- 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: NodeJS, Core Java, 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

- 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