

Kumar Saurabh

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EDUCATION

Indiana University , Bloomington, Indiana	May 2023
<i>Master of Science in Computer Science</i>	4.0 GPA
University of Mumbai , Mumbai, India	May 2016
<i>Bachelor of Engineering in Computer Engineering</i>	3.4 GPA

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, Java, SQL, HTML, CSS

Databases: MySQL, PostgreSQL, DB2, MongoDB, Redis, Couchbase

Frameworks/ Technologies: Node.JS, Spring Boot, ReactJS, React Native, JUnit, Next.JS, Typescript, Nginx, Kibana

Skills and Interest: Git, Linux/Unix Commands, Maven, Jenkins, Microservices, REST APIs, Docker, Kubernetes

Topics: Algorithms, Data Structures, Cloud Computing, Distributed Systems, Agile Methodology

PROFESSIONAL EXPERIENCE

Software Engineer Intern, Ancestry.com, USA May 2022 – August 2022

Technologies: *TypeScript, NodeJS, ReactJS, AWS, MySQL*


- Migrated admin portal from Perl codebase to new architecture using **Typescript and NextJS** improving the administrative effectiveness by **17%**.
- Developed REST APIs to cater the request from portal including support of filtering and pagination using GraphQL, NodeJS and MySQL with **14ms average** response-time.
- Implemented and optimized complex SQL queries to fetch user data from MySQL and **improved API response time by 23%**.
- Build and maintain security log aggregation and detection systems using distributed monitoring tool – **ELK stack**.
- Participated in E22 hackathon to design and developed DNA social Network and won **“Best Design”** award.

Senior Software Engineer Jio Platforms Limited, Mumbai, India June 2016 – August 2021

Technologies: *NodeJS, ReactJS, Python, Redis, MySQL, MongoDB, Elasticsearch, Kibana, Nginx*

- Engineered the entire backend of the JioTV application and developed **REST APIs** using Node.JS, Nginx, MySQL, Redis, Couchbase, MongoDB, and Elasticsearch. Scaled Back-end to handle more than **200 million** downloads on Playstore and AppStore combined and **7.2 million concurrent users**.
- Built the architecture and pipeline for live scorecard and sports videos integration from Newtork18 for transcoding video files using **FFmpeg** as well as delivery through **HLS and Mpeg-dash** which enhanced **daily content consumption by 21%** on JioTV.
- Modernized Search API which resulted in **87%** improvement in response time.
- Integrated Application Performance Monitoring (**Elastic APM**) in APIs to easily identify production issues which **eliminated downtime by 95%**.
- Orchestrated **content security** implementation in video feeds using **Akamai Hmac token and Nginx**; prevented video leakage on fake applications and avoided monetary loss for the company.
- **Mentored** operations team which handles production deployments and monitors system for errors.

ACADEMIC PROJECTS

Weather Radar : Technologies: *Java, Python, NodeJS, ReactJS, Kubernetes, Nginx, AWS S3 Bucket* Jan 2022 - May 2022

- Co-designed and developed loosely coupled **microservice architecture** web application for weather forecasting along with session-management using JWT authentication.
- Implemented caching mechanisms using Nginx and Redis which resulted in throughput by **77% improvement** in throughput and API response-time **reduced by 84%**.
- Used **Kubernetes** to orchestrate the deployment, scaling and management of Docker containers; integrated **GitHub Actions and AgroCD** for CI/CD pipeline.

Cooking Made Easy : Technologies: *NodeJS, Python, Flask, MySQL* Jan 2022 - May 2022

- Led a team of 3 to design and develop cooking recipes website.
- Created the database design schema and designed SQL queries to manipulate database based on user action on the web applications
- Devised cron-jobs for continuous ingestion of new content in system's database triggered by updates in kaggle database.