

Aritro Roy

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EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY (ISM) DHANBAD

BACHELOR OF TECHNOLOGY
Electronics and Instrumentation Engineering
June 2022 | Dhanbad, India
Cum. GPA: 7.62 / 10.0

SKILLS

PROGRAMMING

C++ • Java • JavaScript
Familiar:
Python

DEVELOPER TOOLS

VS Code • Postman • Git • IntelliJ

DATABASES

MySQL • MongoDB

FUNDAMENTALS

Data Structures • Algorithms • DBMS

MISCELLANEOUS

NodeJS • ExpressJS • SpringBoot
Redis
Familiar:
AWS

LINKS

🔥 : Leetcode
🔗 : Codechef
🌐 : LinkedIn
🐙 : Github

ACHIEVEMENTS

🔥 : Leetcode

- Solved 800+ Algorithmic challenges
- Rated Knight 1900 (top 5 %)

🔗 : Codechef

- 4 star 1857

EXPERIENCE

BYJUS (THINK AND LEARN PRIVATE LIMITED) | SOFTWARE ENGINEER

June 2022 - Present | Bangalore, India

BYJUs Core | Java, SpringBoot, JavaScript, NodeJS, MongoDB, MySQL, AWS

- Worked as a part of the team **Teacher Tech Horizontal**, responsible for managing tutor experiences, from onboarding to allocation. Tutors were previously allocated manually to batches by the Ops team, equating to roughly **2000 manhours**. I was responsible for optimising this effort by automating the entire workflow. Automating the allocation task saved **90% of the previous man-hours**
- Availability Microservice Development:** Led efforts to automate the manual tutor allocation process, resulting in a savings of approximately **2000 man-hours**. Designed and implemented a microservice to efficiently assess tutor eligibility and availability, enabling the allocation of **50,000+ tutors to 10M+ classrooms across all business verticals**.
- Engineered an event-driven architecture approach with SQS, one producer, and one consumer architecture.** By leveraging this architecture, we could offload the data-intensive processes, such as slot generation and booking, to another server instance.
- Tech Stack:** Node JS, Express, MySQL, SQS, S3
- Orchestrator Microservice Development:** Spearheaded the design and implementation of an Orchestrator microservice to seamlessly manage three key microservices: "Availability," "Batching," and "Scheduling." This strategic orchestration enhanced the efficiency of tutor allocation for streamlined student batch creation and scheduling processes.
- Formulated onboarding of pre-existing tutor and classroom data in CSV to our platform. Orchestrator microservice extracts data from CSV and runs a job to coordinate with the Availability, Batching, and Scheduling services to generate batches and schedules and assign tutors.
- Leveraged event-driven architecture using SQS to offload the asynchronous processing of the CSV file.** The orchestration service processed the file, extracted the necessary details, and interacted with the Availability, Batching, and Scheduling services. This coordination resulted in the generation of student batches, schedules, and the appropriate assignment of tutors.
- Tech Stack:** Java SpringBoot, MySQL, SQS, S3
- Coordinated with business vertical teams to onboard them to our Horizontal platform. Engineered the process of **back-filling** and **forward-filling** of new data to process with **smooth depreciation** of the existing services. **Migrated 5M+** existing data to our service.

PERSONAL PROJECTS

TOY LOAD BALANCER

- Implemented a basic toy load balancer using consistent hashing algorithm, with live load distribution visualizer.
- Technology used: NodeJs and ExpressJS (for the load balancer APIs and logic), python3 (for visualizing and writing request sending script)