# Soumalya Bhattacharya

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Medium: [soumalyabhattacharya6](https://medium.com/@soumalyabhattacharya6), LeetCode: [soumalyabhattacharya6](https://leetcode.com/u/soumalyabhattacharya6/)

## Work Experience

### Junior Software Engineer @ Cognizant (September 2023 - Present)

1. Enhancing Document Storage System for Proactive Monitoring
   * Developed a **near real time monitoring system** using Java, Spring Batch and Angular, enabling the support team to proactively address issues and **improve system performance**.
   * Implemented parallel workflows and optimized data handling, resulting in a significant **reduction in compute resource usage.**
   * Achieved a **58% reduction in average response times** to incidents and a **70% decrease in escalations** by predicting outages based on document accumulation trends.
2. Optimizing API Efficiency for Cost Reduction
   * Implemented API efficiency improvements, achieving a **63% reduction in third party service calls**, leading to significant **operational cost savings**.
   * Reduced p90 response time from over 2 seconds to 510ms, enhancing user experience and service reliability.
   * Collaborated with cross-functional teams to ensure **Agile methodologies** were followed, improving project delivery timelines.

### Digital Nurture Trainee @ Cognizant (March 2023 - July 2023)

1. Full Stack Application Development Using Microservices
   * **Frontend Development**: Created a responsive user interface using React and MUI.
   * **Backend Architecture**: Developed a robust backend with Java and Spring Boot, incorporating:
   * **Service Discovery**: Integrated Netflix Eureka for efficient service management.
   * **Security Features**: Implemented authentication and authorization with Spring Security.
   * **Resilience Patterns**: Added retry and rate limiting using Netflix Hystrix.
   * **Application Gateway**: Configured an application gateway with Spring Application Gateway.
   * **Load Balancing**: Enabled client-side load balancing using Spring Boot.

## Projects

### Hangout

**Tech Stack**: *Java, Typescript, Go, Kafka, Postgresql Docker, Kubernetes, Spring Boot, Nest Js, Loki, Tempo, Prometheus, Grafana*

* Building a **cloud-native application** that allows users to find and book venues based on thier location and other factors, utilizing **microservices architecture** for scalability and maintainability.
* Managed source code through **Git Submodules**, facilitating collaboration among multiple teams and improving **version control** practices.

**Repos**: [Hangout - Main Repo](https://github.com/opticSquid/hangout)

**Publications**: [Part 1](https://medium.com/@soumalyabhattacharya6/building-a-modern-cloud-native-full-stack-microservices-project-end-to-end-introduction-e91e4d56bcd9), [Part 2](https://medium.com/@soumalyabhattacharya6/building-a-modern-cloud-native-full-stack-microservices-project-end-to-end-project-idea-and-f3cf8cef1c20), [Part 3.1](https://medium.com/@soumalyabhattacharya6/building-a-modern-cloud-native-full-stack-microservices-project-end-to-end-part-3-1-bd735b91e6b0)

### MyBondhu Portal

**Tech Stack**: *Javascript, React, Nodejs, Express, Mongodb*

* Developed a portal that locates nearby medical facilities, showcasing skills in **full-stack development** and **database management** and using geospatial queries with **MongoDB**.
* Implemented features that allow users to filter results based on availability of beds, doctors, ICUs, Oxygen enhancing the **user experience** during critical situations.

**Repos**: [Frontend](https://github.com/opticSquid/IIC-Covid-Help), [Backend](https://github.com/opticSquid/IICCovidHelpServer)

## Skills

### Tehnical Skills

Proficient in Java, JavaScript, Typescript, Python, C++, and Go; experienced with Spring Framework, React, Angular, Node.js, Docker, and Kubernetes. Well versed with Unix based Operating Systems

### Soft Skills

Strong problem-solving abilities, effective communication, and a proven history of collaboration in team settings.

## Educational Background

### B. Tech (Electrical Engineering) [2019-2023]

* College: Techno Main Salt Lake, Kolkata
* YGPA: 8.98