

Kingshuk Sadhu

Website: kingshuk-sadhu.tech

Github: [Kingshuk99](https://github.com/Kingshuk99)

Email: kingshuksadhu1999@gmail.com

LinkedIn: [visit-kingshuksadhu](https://www.linkedin.com/in/visit-kingshuksadhu)

Phone: +91-8597292797

EXPERIENCE

• **Enphase Energy**

Bangalore, India

Software Engineer

Jul 2022 – Present

- Automated monthly reports on average discharge energy for Grid Services programs using **Quartz scheduler**. Reports are uploaded to **SFTP** server and **AWS S3**, reducing manual effort.
- Designed and led the development of **site-control** feature to enable users to create multi-asset events driven by an intelligent algorithm. Used **Asynchronous** queues and topics (**AWS SQS** and **SNS**) to create real-time events.
- Designed a Notification Service with **asynchronous** messaging via **AWS SQS** and **SNS**, supporting **email** and **in-app** alerts based on user preferences. Collaborated with Product Manager, DevOps and Quality Assurance team.
- Optimized the latencies of 10 high-traffic APIs (~ 150-250 rps) in Grid Services, reducing their **P95** latencies to under 200 ms.
- Integrated **Redis** as a caching layer for Role-Based Access Control (**RBAC**) lists in microservices to optimize latency, alongside database **query optimization, indexing and pagination**.
- Designed and implemented **Dynamic Form** that stores metadata about a program's form. The form's properties can be configured by the admin. This has reduced the onboarding time for new partners.
- Implemented **Scheduler Locking** to ensure cron jobs execute on only one node at a time by using a shared database across worker nodes, allowing for lock acquisition by only one node.
- Upgraded two **microservices** from Spring Boot 2 to Spring Boot 3 to reduce security threats and address vulnerabilities in the older version.

SKILLS

- **Languages:** Java, C++, Python
- **Frameworks & Technologies::** Spring Boot, Spring MVC, RESTful APIs, Maven, Gradle, MongoDB, AWS, Redis, Git, Kubernetes, Jenkins, Datadog, Jmeter
- **Concepts & Practices:** Cloud Engineering, OOP, Data Structure, Algorithm

EDUCATION

• **Indian Institute of Technology, Kharagpur**

CGPA: 9.16/10

M.Tech in Instrumentation and Signal Processing

Sep 2020 – May 2022

(Project in Image Processing using Federated Deep Learning)

• **Jadavpur University, Kolkata**

CGPA: 9.15/10

B.E. in Electrical Engineering

Jul 2016 – Aug 2020

PROJECTS

• **Model Verifiability in Federated Learning (M.Tech Project):**

[GitHub](#)

- Standard federated averaging algorithm struggles with malicious clients; hence formulated and implemented a **stochastic federated averaging** algorithm to detect and mitigate their impact.
- **Technologies:** Python, PyTorch, Deep Learning; **dataset:** DRIVE(Digital Retinal Images for Vessel Extraction).

• **Discussion Forum:**

[GitHub](#), [Render.com](#)

- Developed DoConnect, a question-answer forum website.
- **Frontend technologies:** React.js, JavaScript, CSS, Bootstrap; **backend technologies:** JavaScript, Node.js, Express.js; **database:** MongoDB; **chat feature:** Socket.io.

• **Pizza Store:**

[GitHub](#), [Render.com](#)

- Built a pizza store website using React.js, JavaScript, and CSS with a JSON server for data storage and mock APIs.

• **Chat Application:**

[GitHub](#)

- Developed a real-time chat app with React.js and Socket.io for chat features; backend built with Node.js and Express.js.