

HIRAK MONDAL

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Professional Summary

Backend Software Engineer with 2+ years of experience designing and delivering **secure payment systems** and **microservices-based services**. Hands-on experience with **OLW/CLW wallet flows, encryption, distributed systems, and observability** using **Java, Python, Kafka, AWS, PHP**.

Experience

PayU Payments Private Limited

Software Engineer

Bengaluru, India

Apr 2025 – Present

- Owned the design and delivery of end-to-end **Open Loop Wallet (OLW)** and **Closed Loop Wallet (CLW)** payment flows across **3+** platforms in a **microservices-based architecture**, collaborating cross-functionally with **iOS, Android, and Web frontend teams** and coordinating with **multiple banking partners** to enable secure, high-volume transactions using **Java and PHP**.
- Engineered a reusable **AES-RSA hybrid encryption framework** with **Base64 encoding**, securing sensitive payloads **in transit and at rest** across **10+ internal services**, significantly reducing data exposure risks in **inter-service communication**.
- Automated secure bank data ingestion pipelines using **Python**, processing **password-protected ZIP files** and **cell-level encrypted Excel/CSV data**, improving data processing efficiency by **60%** and eliminating manual intervention.
- Developed **Grafana-based observability dashboards** across **10+ microservices**, monitoring **API throughput, CPU, and memory utilization**; implemented proactive alerts that reduced incident detection and response time by **40%**.

Associate Software Engineer

Jul 2023 – Apr 2025

- Enhanced an **org-wide distributed logging pipeline** (**Fluent Bit → Kafka → FluentD → S3 → OpenSearch**), reducing infrastructure and operational costs by **80–90%** while improving production troubleshooting efficiency.
- Optimized archived log indexing and retrieval workflows from **Amazon S3**, improving search efficiency by **60–70%**.
- Migrated legacy **cron-based workflows** to **Dolphin Scheduler**, extending **RBAC** with a custom “**Maintainer**” role to enable delegated project permissions.
- Customized **Dolphin Scheduler UI** and integrated **Hub-based authentication**, improving platform security and user experience.
- Improved code quality and security posture by increasing **SonarQube coverage to 90%+**, achieving an **A+ security rating** and ensuring long-term maintainability across services.

Software Engineer Intern

Jan 2023 – Jun 2023

- Modernized the org-wide logging pipeline by migrating from **Logstash** to **Fluent Bit → FluentD → Kafka**, significantly reducing resource usage and improving log ingestion performance.
- Contributed to building a **scalable and cost-efficient** centralized logging system supporting **multiple production services**, laying the foundation for future infrastructure cost optimizations.

Technical Skills

Languages: Java, Python, PHP, C++, SQL

Backend & Messaging: Kafka, Redis

Cloud & Infra: AWS (S3, EC2, EventBridge), Localstack

Observability: Fluent Bit, FluentD, Logstash, OpenSearch, Grafana

Testing & Quality: JUnit, Mockito, SonarQube

Tools: Git, Postman, IntelliJ IDEA, VS Code

Education

Jadavpur University

2019 - 2023

B.E. in Electronics and Instrumentation Engineering (CGPA of 8+)

Kolkata, India

Barasat Mahatma Gandhi Memorial High School

2011 - 2019

(Class X: 87.4% — Class XII: 80%)

Kolkata, India

Academic Projects

- Image Processing WebApp** – Image editing and analysis using **Python, OpenCV, Streamlit**.
- Metal Corrosion Detection** – CNN-based image classification using **Python, TensorFlow**.

Achievements

Received the prestigious **ThankU Award** from the **CEO** for exceptional impact by optimizing critical log pipelines, achieving **80–90%** cost reduction. [Certificate]