

# HIRAK MONDAL

Bengaluru, Karnataka

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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

Bengaluru, India

*Software Engineer*

*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]