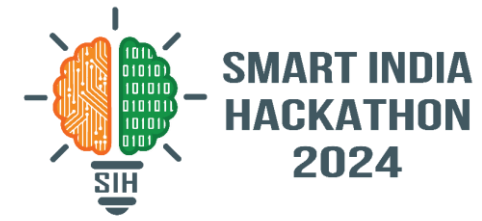
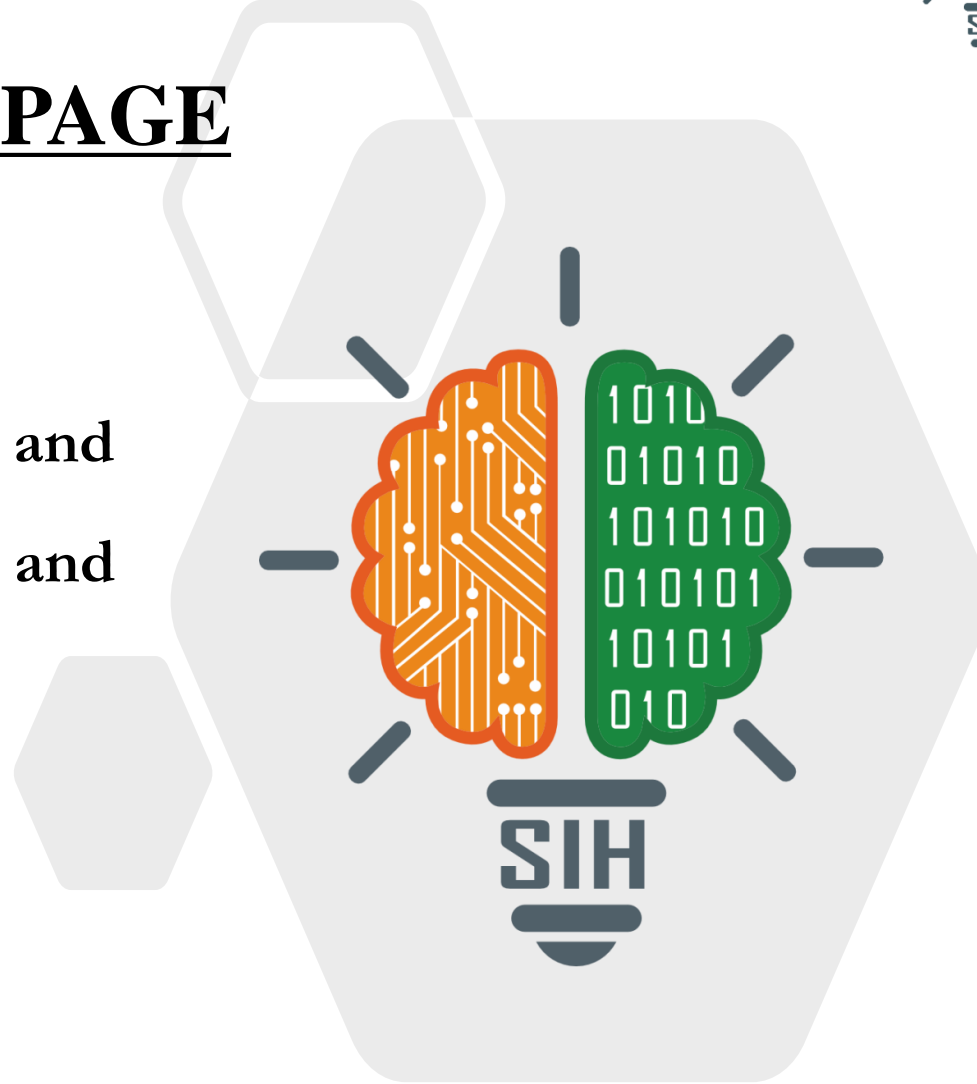


# SMART INDIA HACKATHON 2024



## TITLE PAGE

- Problem Statement ID – SIH1645
- Problem Statement Title- An app and web based software for productivity and safety management of coal mines.
- Theme- SMART AUTOMATION
- PS Category- SOFTWARE
- Team ID-
- Team Name- COAL MINE INNOVATORS



## ❖ Proposed Solution

### 1. Digital Shift Handover Log System

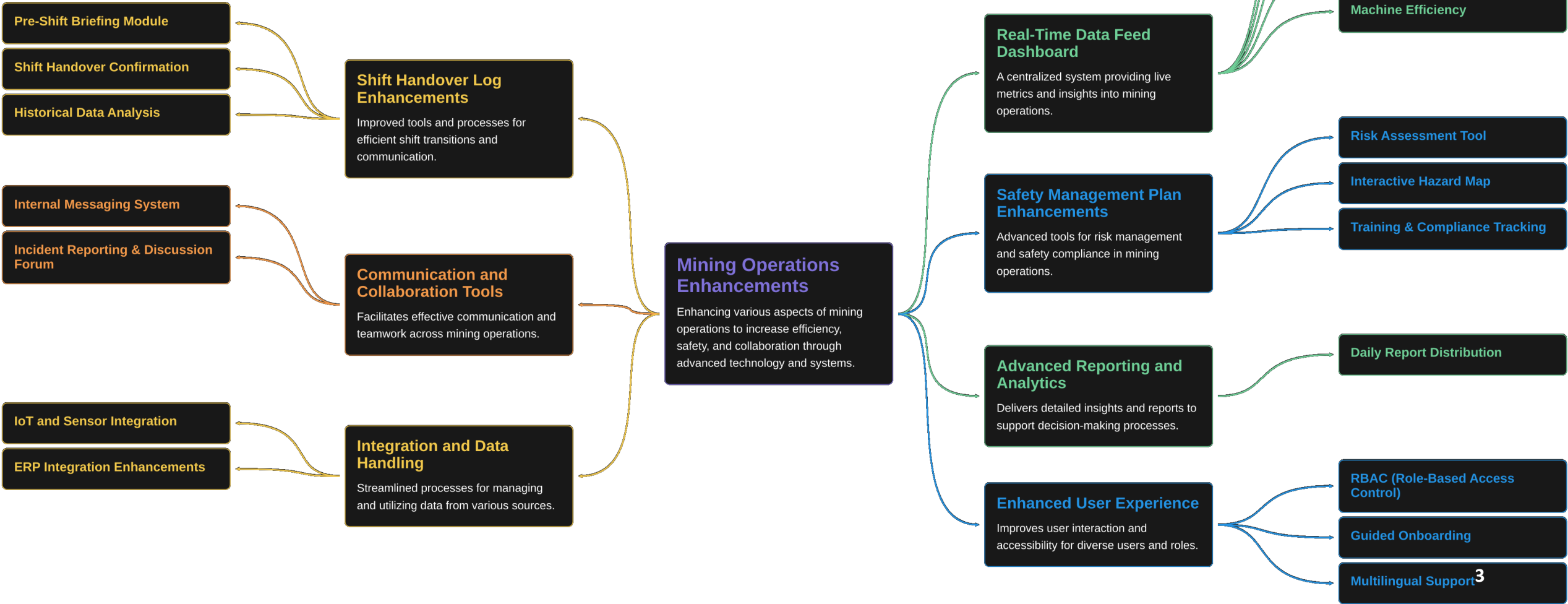
- **Objective:** Streamline and digitize shift handovers.
- **Features:**
  - App & web platform for supervisors/operators.
  - Digital templates for statutory/non-statutory logs.
  - Real-time updates/alerts for critical incidents.
  - Automated PDF report generation.
  - Search & filter past logs.
  - ERP integration.
- **Benefits:**
  - Improved communication & productivity.
  - Enhanced safety monitoring.

### 2. Digital Safety Management Plan (SMP)

- **Objective:**
  - Digitize SMP per DGMS guidelines.
- **Features:**
  - Digital hazard identification & control mechanisms.
  - Checklists, dashboards, and incident tracking.
  - Digital responsibility assignments.
  - Automated audit/compliance reports.
  - ERP integration.
- **Benefits:**
  - Better risk management & regulatory compliance.
  - Clear accountability & safety adherence.

### 3. Data Security Considerations

- **Objective:**
  - Ensure confidentiality, integrity, and availability of sensitive data.
- **Features:**
  - Encryption: End-to-end data protection.
  - Role-Based Access: Controls data access by user roles.
  - Security Audits: Regular checks for vulnerabilities.
  - Backup & Recovery: Ensures data retrieval after incidents.
- **Benefits:**
  - Data Security: Prevents unauthorized access.
  - Continuity: Safeguards operations during disruptions.
  - Risk Reduction: Minimizes chances of data breaches.





## • ANALYSIS OF FEASIBILITY:

- TECHNICAL
- OPERATIONAL
- BUISNESS
- MARKET
- CONNECTIVITY
- TRANSPIRANCY
- ACCOUNTIBILITY



CHALLENGE

## • POTENTIAL CHALLENGE AND RISK:

- HEALTH
- OPERATIONAL
- FINANCIAL
- TECHNICAL
- INFLAMMATION



## • SOLUTION TO CHALLENGES:

- DIGITALIZATION
- ACCESSIBILITY
- CONNECTIVITY
- TRANSPIRANCY
- SAFETY

## 1. ENHANCE TRANSPARENCY:

- The project will increase transparency between the government and the coal mine industries , promoting accountability.

## 2. REDUCTION IN CORRUPTION AND FAIR WAGES FOR LABOUR:

- Improved transparency can reduce corruption and illegal financial activities, ensuring workers receive accurate salaries and funds. This, in turn, can help reduce poverty and improve their quality of life.

## 3. WORKERS AND ENVIRONMENT SAFETY:

- The project will enhance workers safety and reduce environmental harm through stricter safety protocols and real time hazard monitoring.

# RESEARCH AND REFERENCES



**GITHUB  
LINK**

[https://github.com/Gaurav-K-Github/SIH\\_2024](https://github.com/Gaurav-K-Github/SIH_2024)

**FIGMA**

<https://www.figma.com/proto/pB3dG3H7WpPC1TgY9GPSxi/Untitled?node-id=46-19&node-type=CANVAS&t=l0Dqf9Bc4wHAGhwU-1&scaling=scale-down&content-scaling=fixed&page-id=0%3A1>