This folder contains all file names and their purposes submitted in the folder named "SIH1314_ELEVATE"

Front_end_website

- We develop several administrative pages within the React framework. The dashboard page allows administrators to view the real-time locations of each shovel and dumper. In the monitoring section, they have access to essential information specific to each vehicle and individual, along with the ability to retrieve historical data. Additionally, they can issue alerts to operators and send personalized messages.

Back_end_website

- We crafted the backend using Express technology. To enhance integration with the supply chain, we deployed a Hyperledger system. Our implementation includes various algorithms to ensure the system operates at peak efficiency, enabling the optimal assignment of dumpers to operators.

App

We developed an application for both dumper and shovel operators. This app automates the allocation of dumpers to shovels in an optimized manner. Operators can view their profiles and access a help and support section, where they can request assistance in multiple languages.

Dumper_wifi_simulation

- main.py: This script scans for available Wi-Fi networks and connects to shovel credential files. It then reads data from a simulation and consistently transmits this data to a shovel ESP32 device through a Wi-Fi socket.
- shovelCreds.py: A file that stores the SSID and passwords specific to the shovel.
- simul.py: This file contains sample simulation code that mimics the behavior of a real load sensor.

Shovel_wifi_simulation:

- [main.py](#): gets data from dumper and relays it to a screen as well as cloud i.e firebase

Load_Sensor_simulation

- [sensor.py](#) : This is the code which was used in wifi simulation [simul.py](#) You can see the sample plot of the simulation

Neural_Network_code:

- aa.py : Utility codes for dumper load sensor simulation
- dnn_utils_v3.py :Utility codes for neural networks
- model.py : defining layers and models, and conducting training, mean square error

Chat_bot

- link=Emergency contact, alert systems (final stages), report breakdowns and accidents

Admin_Report_Generator:

- [sihexcel.py](#) : converts present data in database into excel format
- random_monthly_report.xlsx : has a excel sheet which is downloaded from the admin portal

PPT

- this contains our detailed approach and methods with diagrams and flows

Notion links (all our information and research)

https://www.notion.so/SIH-9c00af8519a547e5a42051183f855064

https://www.notion.so/Backend-TeamElevate-SIH-6c32101bd3fc494281faa64851f63c38