Minutes of Meeting
Date: August 4, 2023
Attendees: Javad, Masoud, Tim, Amin, Malihe, Mario

Discussion:

1. **Simulation of Dispatching System:**
   Malihe presented a simulation of a dispatching system using the OpenCLSim package, employing fixed m shovels to n trucks assignment. The simulation displayed the material moved by each truck to designated destinations. The primary aim is to identify high-risk areas with heavy truck flow to implement preventive measures against potential accidents. The group discussed adopting dynamic dispatching. Masoud suggested adapting it based on changing conditions, while Javad recommended changing it after each cycle. The idea of defining objective functions to optimize operations based on various targets was also proposed.

2. **Thesis Presentation:**
   Mario shared his thesis findings, which included over 100 simulations for different operation types, autonomous, hybrid, and non-autonomous, and scenarios. He introduced a risk assessment matrix that determined the safety of each operation system by analyzing collision rates. A heatmap indicating collision-prone intersections was presented, and suggestions were made to refine it. Javad advised limiting the heatmap to roads, and Tim recommended a suitable software for the task.

3. **Software GUI Enhancement:**
   Amin presented his software GUI and highlighted the addition of adjustable risk calculation features. Users can define distribution functions and parameters for risk assessment. Amin plans to further develop the software and risk calculation capabilities. A discussion with Javad about GUI configuration was proposed.

Next Meeting:

- **Malihe:** Implement dynamic dispatching based on objective functions.
- **Mario:** Refine the heatmap by limiting it to roads
- **Amin:** Continue refining the software, and risk calculation, and hold an internal discussion with Javad regarding GUI configuration.