**Minutes of Meeting**

**Date:** August 16, 2023

**Attendees:** Javad, Masoud, Amin, Malihe

**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.

1. **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.

1. **Software GUI Enhancement:**

Amin showcased software GUI progress and highlighted adjustable risk calculation features. The team engaged in a dialogue about enhancing GUI user-friendliness for all users. Masoud proposed modifying criteria and options buttons for ease of use. A discussion about preventive and mitigating barriers, risk factors, and calculating safety levels based on MTBF and risk probability took place.

**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**.**