## Risk Report

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Risk Identification:

1. Uncertainties in the data leading up to the prediction of the trajectories: making sure that with the data that will be used, that the trajectories which result in uncertainties in the prediction of the asteroids.
2. Damage: This is more of the societal impact, but if this were to be messed up, there would be severe loss of life, as the miscalculation of the trajectories would be severe.
3. Economic costs of damage mitigation and recovery: This ties in with the point above, but if this were to happen in a highly populated area, the financial aspect of things must be considered and focused on. Making these predictions is fine, but when considering what needs to be improved in terms of the infrastructure side of things, the cost shouldn’t just be ignored for society’s safety. Mitigations and improvements must be done of course, but there must be a limit to what can be done, instead of dumping money.

Risk Assessment:

Each risk identified here is based on the likelihood and the potential impact on society, and since the project is already based on a “simulation” of asteroids hitting a highly populated city, these must be considered for. These three risks are prioritized for even further analysis and mitigation planning.

Risk Analysis:

1. Uncertainties in the trajectories: cross checking and cross validating all of the values in the data from the created data set, with the past asteroid impact dataset, to make sure and confirm that the data is on the right track and can be used. In the future, for a bigger and better project, improving the modeling techniques and the observational capabilities would be necessary to reduce the uncertainties, if there are any.
2. Damage: development of better systems to warn of these potential impacts would prove to be helpful. As stated from above, anything to improve models would help in every way.
3. Economic costs of damage mitigation and recovery: Utilizing the improved models would help in terms of the cost, and then of course taking and correctly utilizing the funds into the correct places and not overdoing it would help as well. But generating the improved models from the top 2 points is priority for everything else to fall into play

Action Plan:

Cross reference and cross check the 2 data sets to verify and confirm that there isn’t any missing data or outliers, then use that to check that there aren’t any outlining uncertainties that need to be looked at.

Improvement of models to be used for both the damage and economic parts of the project.

Development of better damage and economic plans from the improved models that will be created.

Once the final model is created, make sure everything looks and seems to be correct.