Capstone Two - Project Proposal
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Project Statement:
The purpose of this project is to determine a method of predicting the diameter of asteroids.

Context:
Asteroid data is tracked for determining the amount of risk an asteroid poses to Earth. It can be difficult to determine the actual size through visual methods, due to the amount of reflected light. Determining the amount of light reflected can require variables that are unknown, such as the compounds that make up the asteroid, which makes other methods of finding diameter more feasible than others. Asteroid diameter is important in risk analysis for determining severity of impact on Earth and space missions.

Criteria for Success:
The project will be considered successful if it has a high rate of accuracy in determining asteroid diameter and then maintains that consistency when used on future occurrences.

Scope of the Solution Space:
Information being used for this project ranges from how the asteroids are moving through space to known physical characteristics.

Constraints:
There are unlikely to be any other datasets that can be associated with this project. Also, much of the data may be predicted itself, which may increase the variability in the results of any modeling.

Stakeholders:
-Lead Asteroid Watch
-Heads of Missions

Data Source:
Provided by Jet Propulsion Laboratory of California Institute of Technology database, an organization under NASA.

Initial Thoughts on Approach:
-Data organization: the data is going to go through many transformations, so it is important to keep track of everything in the case that something does go wrong.
-Data definition: understand what the variables are and make sure that their types and information match.
-Data cleaning: resolve any issues that are found with the data, such as missing values and mixed types.