Propelled Cube Team Win Cons

Summary of Minimum Viable Product

A set of software which utilizes atleast one of UTD's HPC clusters to run a physics simulation which uses an ideal setting with no air resistance to simulate a cube navigating around geometric obstacles and improving the efficiency at which it moves around these geometric objects using some sort of machine learning and python. The usefulness of a visualization of the simulation is yet to be determined, but who knows.

The efficiency of the cube's movement around the obstacles is measured in how far in the x-axis the cube travelled without touching a single obstacle. The cube starts at (0, 0, 0) with a large 3 space to move in which is walled off by the xz-plane and xy-plane. In an admittedly extremely abstract and ignorant way, our goal is to use Machine Learning to make a cube go super fast around a set of obstacles for as far as it can without touching any.

Obstacles the cube will need to avoid

- Cones *

Required Characteristics of the MVP

- Must use kinematic equations and stuff, **AIR RESISTANCE NOT INCLUDED**. *

MUST BE FINISHED BY AUGUST 17