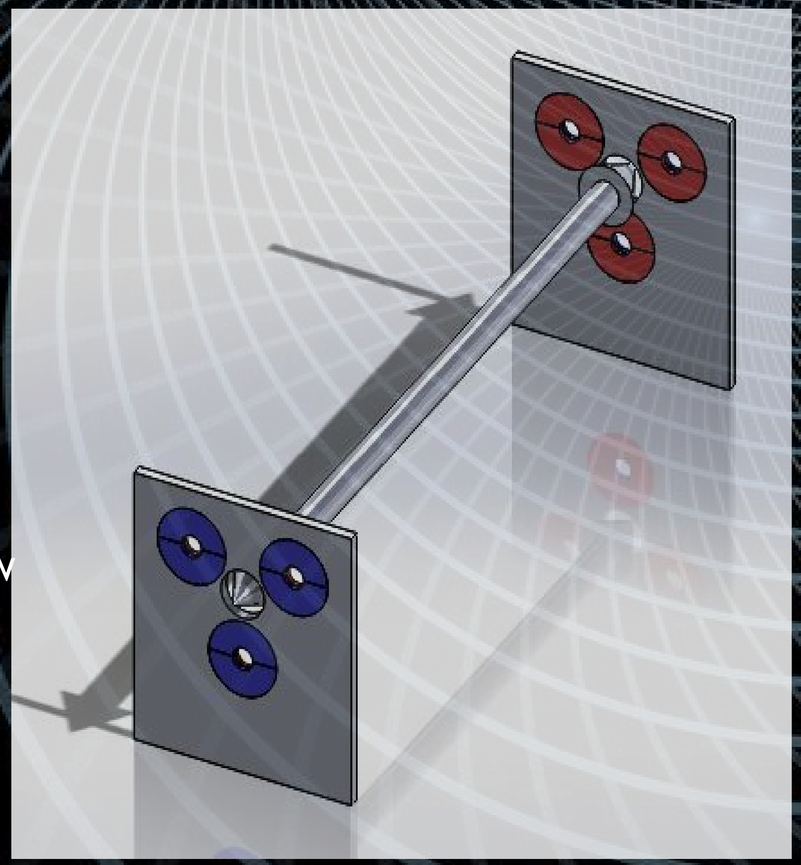
FreeWheel

Mission

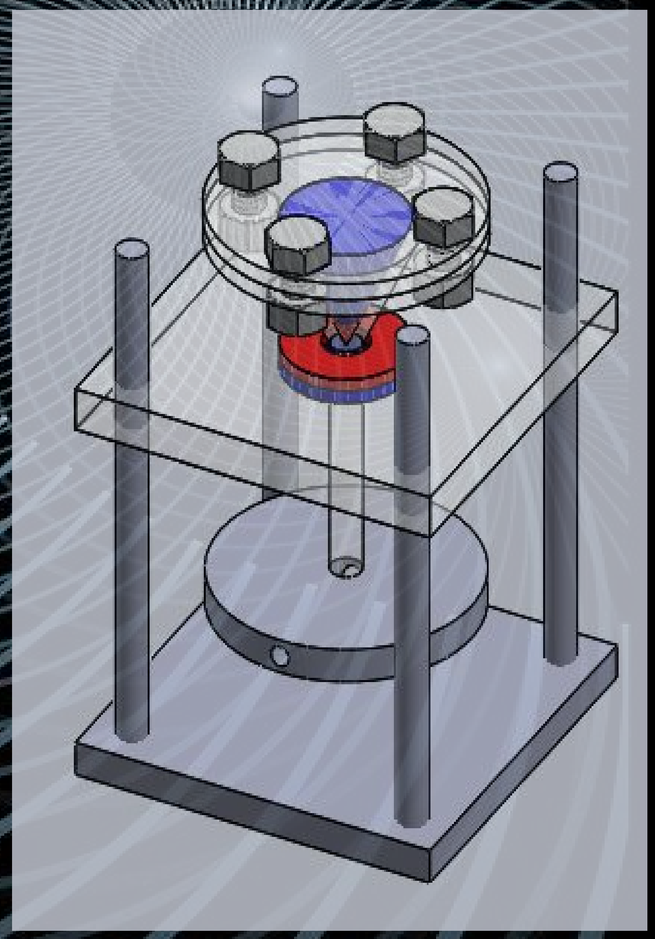
Currently, suspensions comprise of a system of highly fricative gears connected to the engine. Each introduced contact point saps a little bit of the engine's output, and creates engines that have low mileage ratings and require refueling or recharging.
Our project's goal is to virtually eliminate these existing, inefficient suspension systems in today's cars by creating a magnetically levitating suspension, making contact with the body of the vehicle only at a single, low-friction point.

Design

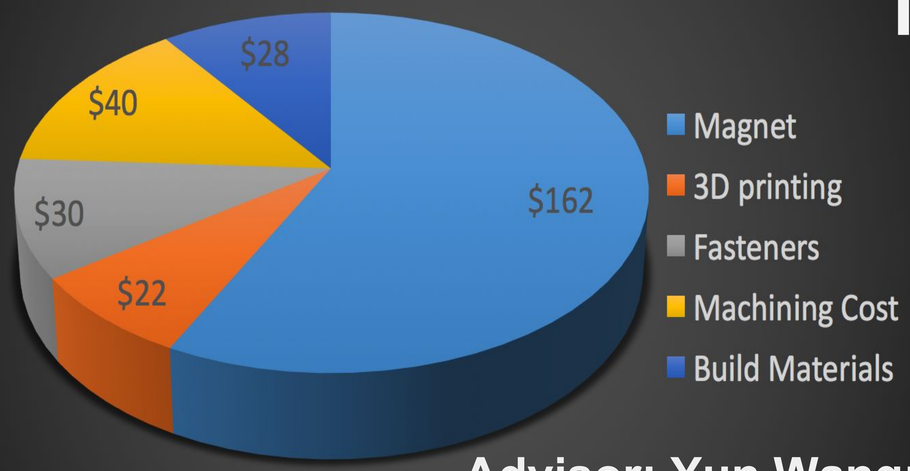
Our test model utilizes a hanging weight design to allow us to test various parameters of the system, including pull/push weight and stability (with error), to help us better design our final product.



The final design of our project incorporates an alternator at the center of the suspended axle in order to extract rotational energy generated upon its spinning, the error of which we plan to calculate by having the spin initiated by a motor.



Cost



Timeline

Fall

- R&D a simplified prototype
- Experiment with different bearings

Winter

- Vertical design using conical magnet
- Test stability using weights

Spring

- Horizontal design using complementary conical magnets
- Attach motor-generator

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