

Base idea: one axis (z-axis) design

Design considerations:

- Keep the geometry simple
 - This will make it a lot easier to calculate the Inertia/center of mass
- Make sure that the design is symmetric
 - Calculating the center of mass for a simple shape is much easier
 - Ex: equilateral triangle, square, circle
- Only has one wheel:
 - It can only be stabilized along one axis
 - There can only be one degree of freedom
 - Z-axis
 - The y- and x-axis must be fixed
- Only focus on stabilization
 - The reaction wheel should be made so that the block doesn't fall over
 - No rotational efforts:
 - Shouldn't work to the point that the item can self-rotate
 - Too complex
- Cardboard or 3d:
 - I can be more precise with the dimensions with 3D printing
 - More precise dimensions = more accurate C.O.M

Brainstorming design ideas:

- Rectangular prism that balances on one edge
- Triangular prism that balances on one edge
- Cylinder balancing on two beams stabilising y- and x- axis

The electronics necessary for most reaction wheel designs:

- Servo motor
- Cpu
- Power source
- Flywheel (reaction wheel)
- sensor