Team Slash Dash Bang Hash

**Facts**

* Final competition is tentatively planned for April 18.
* We are using a Raspberry Pi 3 as our controller on each robot.
* We will be using ROS and OpenCV for controlling the robot.
* The competition will be a socer game between two teams of two robots each.
* There will be no offsides rule.
* The soccer ball is a golf ball.
* Video data will be gathered by an overhead camera.
* Vision processing is done on a host computer and processed information is passed to the robots.
* All other computation is done on the robot.
* Most hardware on our robots and other teams’ robots will consist of hardware provided by the ECEn shop.
* Robot must fit into an 8” diameter by 10” tall cylindrical can.
* It is a violation to drop parts on the playing field.

**Critical Assumptions**

* Outputs to robots are PWM commands to motors and similar commands to any additional hardware that we add.
* Collisions are illegal
* The field is designed so that the ball cannot get stuck along the walls
* Vision processing will be the most computationally intensive bottleneck
* Motion control will be comparatively difficult to implement
* This simulation has good fidelity relative to the actual operation of the robots