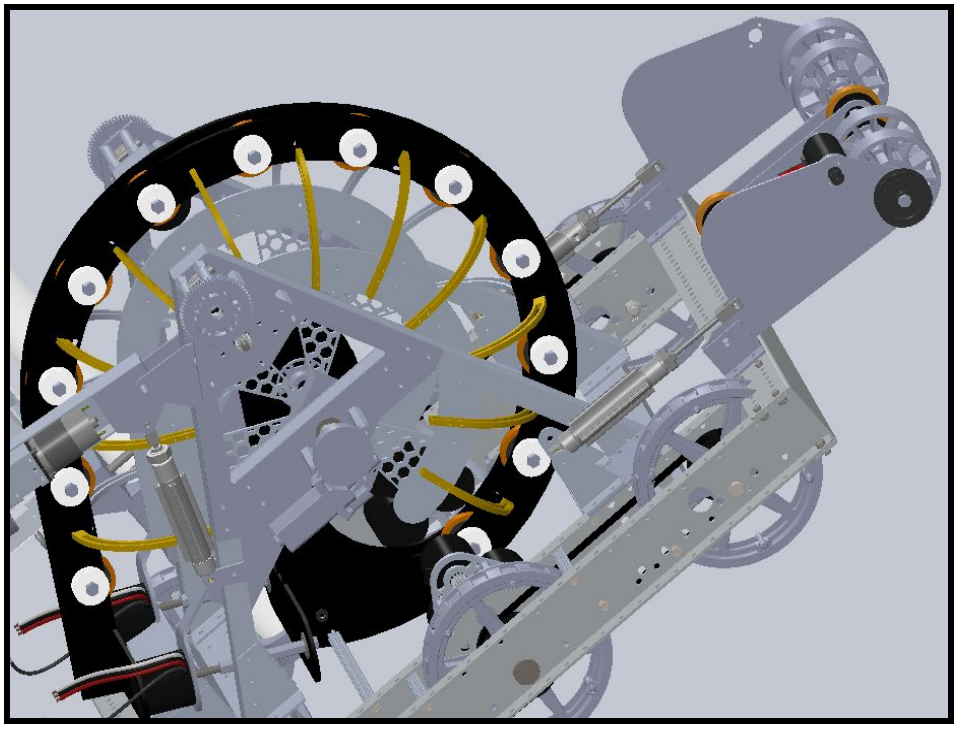
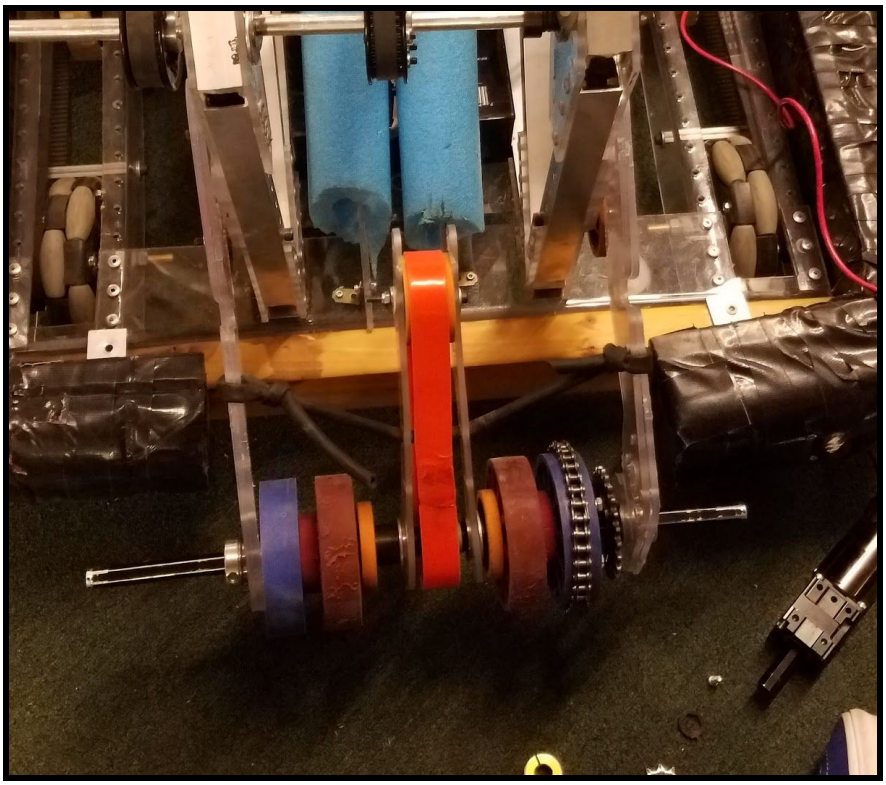
BONDS Robotics Status Report: Week 4

Using the advice we received from the critical design review, we began adjusting our designs and moving from prototypes to final parts.

CAD



With the critical design review over, the CAD team was finishing off their designs and making any needed changes from our critics. The snail was hitting the spinner for the control panel. This was from the complete rotational capabilities of the snail. The team definitely did not want to lose the ability to rotate during the game. We ended up moving the spinner and some support bars so it fit together, even with the movement of our manipulators. We then changed the piston mount to the spinner module. It is now two separate parts as a sub assembly. The engineers from the review also encouraged us to make the intake cad more sturdy, leading us to go back and strengthen it.



Build

Build has worked more on the shooter, spinner, snail, and intake. For the shooter we've worked on the angle and speed of the wheels. We are nearly done with prototyping, but we need to test some more before moving on to final build. We have revised the design of the intake due to the balls not always going in. The new design has four-inch compliant wheels all across in order to direct the ball in more consistently. We then Worked on x-carving parts of the snail. Worked on ordering materials. Cut and drilled some pieces for the generator switch. Lathed snap ring grooves into 2.5 inch hex for the snail. Worked on lathing the hex shaft for snail. Broke one of our tools and one of our mentors used his magic to create a new tool. Worked on lathe and finished cutting grooves into 2.5 inch hex shaft for the snail. Filed and deburred the snail lexan piece.

Programming

We created a new repository for this year's robot code and learned about how we as a team can use GitHub to communicate with each other and collaborate on the code. We updated each other on the progress we made and kept our code consolidated in one central file. In order to do this, we learned some tools we can use on the command line and how to use the GUI to implement these changes. We also started initial code for each of the subsystems, while making good progress on the spinner, crawler, and ground intake subsystems. However, this code is a rough outline for the final robot as we are still not sure how the different parts of the robot will interact with each other, and will have to integrate that into our code.

BONDS 5811

Thank you again for taking the time out of your life to sponsor Bonds Robotics team, your generosity will not go unappreciated. We thank you in the highest for sponsoring our robotics team and helping us ultimately win the competition. Each one of you has been so gracious. Our team is so privileged and humbled to receive financial support, and would like to express our heartfelt thanks for choosing our team to help. Thank all of you so much and none of your support will be taken for granted. Bonds 5811 really appreciates your donations.