

Period 3 - Lessons Learned

Experience Gained

In general, people from our team have improved their public speaking skills, leadership skills, and building and coding. Because we have so many programmers, some of the programmers learn how to build, and when we have finished building the robots, the builders can learn to program to help with the code. They have also learned that resetting the robot is very crucial because even if we get the reset slightly off, that could possibly ruin the rest of the run.

For our team captains, they learned that knowing what is going on with each robot, mechanically and with the coding, is very beneficial because team captains generally have more experience than other team members, so the captains can give their insight on what is going on with the robots. Also, the team captains learned to know the members more personally so the members can be utilized to the fullest of their potential.

Programmers from our team have learned how to program and build better. To program better, programmers learned to be very precise with the numbers for parameters and the code in general.

The builders have also found out that metal pieces do not go well with lego pieces, as it is not too hard for the lego pieces to fall off.

Documentation Process

The necessity of having documentation caused us to, after every meeting, hold a brief discussion of what we have done, and what we plan on doing next. This helped us to run through what we have done and will do, as well as think

through challenges we have faced. Not only did it help us problem solve, but it also revealed problems unseen to us before documentation. The members of the group working on the wallaby robot that grabs crates made their turning both accurate, through the testing that we did for documentation: adjusting the turn, and repeating the process until it measured a 90-degree angle consistently. Lastly, the documentation helped us to learn about what the other robots -- besides the one sub-group was directly working on -- were supposed to do.

Surprises

We were surprised by many things. For starters, everything had to be, surprisingly, extremely accurate. The little bump in the middle made a huge impact on turning right when directly above it. Our turning values had to be nearly perfect. The color values for the camera had to be exceptionally precise. We were also surprised about how hardworking & effective everyone was this year, contrary to the previous year. The camera surprised us in a positive way, being more reliable than expected. On the flip side, there were disappointing surprises. About half of the servos broke, along with several servo ports. We were surprised about how different everyone on our team was, personality and interest wise.

Advice for Future Teams

To begin, it is always good to have likable relationships with your team members to increase overall productivity and joy. Try your best to be nice to everyone, even when they are fooling around. It's important to be on good terms with your team. Be specific with one another so that there are no communication errors. Communicate properly about availability, so that they know and don't wait

up for you. If you have an error, it is essential to fix it right away; don't wait and procrastinate. Save a copy of your code because anything could happen to your code. Finish building quickly, so you can spend more of your time coding and testing.