# **P3 Lessons Learned**

### Experience Gained

During our experience with botball 2019, we have learned a multitude of different skills and facts from engineering our robots and designing their code. One of the integral skills that we learned from botball is how to program in the coding language of C, and by extension how to effectively troubleshoot our programs and expand on them. Another thing that we learned from botball is efficient prioritization of tasks. While we were working on both our irobot and small robot, we had to consider which tasks on the board were most important to the game, and once we chose our strategy, we dedicated more time to the most crucial components of our plan. The last thing that we learned with botball is how to cooperate and communicate with other members of a team, aiding each other in our tasks and assigning ourselves to certain jobs where we could ask for help from each other when we needed it.

#### **Documentation Process**

With our participation in botball 2019, we were also required to perform side tasks for online documentation. Through the online documentation, we learned effective time management as were were forced into situations where we needed to decide on what to work on depending on its importance and how soon it needed to be done. We also needed to keep in mind that we couldn't put off the documents forever. Another thing we learned is how to push code into github, which could be used to share code with other peers.

#### Surprises

While we thought the botball experience would be straightforward, there were some unexpected hurdles that we needed to pass. One thing that surprised us about the botball experience was the amount of time, commitment, and dedication that need to be invested in our robots. While we knew that we would have to work hard, we didn't expect certain tasks that seem simple on the surface to take such large amounts of time and effort. For example, moving the ambulance to one of the medical centers didn't seem like a hard task, however it turned out that it required a lot more patience and pathing to efficiently get it to the destination.

## Advice for future teams

Now that we are nearly complete with our botball experience, we have learned many things that could potentially aid any future team members or other teams in general. One major thing that we learned is to use your given time wisely. Our team often ran into the problems of either procrastinating too much on getting things done or misusing time when it could be used for other purposes of more importance. Another piece of advice would be to decide which wallaby's are best suited for each robot. Sometimes wallaby's (or other pieces of equipment such as motors and servos) could be faulty, which could entail broken ports, black screens, and other problems, so it's important to make sure everything works properly.