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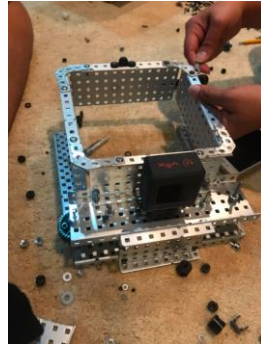
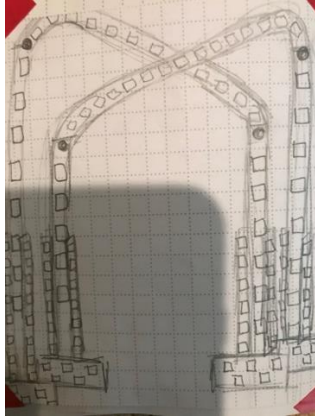
Team: 6096E

Words: 860

Picture this: An intense match between four robots, two on the red alliance and two on the blue alliance. Both alliances have complex and unique designs, allowing them to effectively accomplish their task. After an intense match, you finally look up to see the winning alliance and you notice that all four teams comprised of mainly girls. Most would be taken aback by that, as girls would tend to choose any activity other than robotics and that guys usually take part in robotics. However, girls are starting to be motivated to join robotics and things are starting to change, albeit very slow.

The phrase Girl Powered, in this situation, means showing girls that they belong in the field of robotics. Girls actively participate in the field and learn what it takes to be a roboticist. This drive to learn and create a more advanced robot resides in us girls and is what powers us to do well. My team is a strong team and we are comprised mainly of girls rather than boys. I think the term Girl Powered applies to my team because we are mainly powered by the girls in our team and my coach, who is also a girl. This is my second year being in my VEX team, and my team's story starts from around June of 2019.

It was our second year as a team. We wanted to create an efficient robot that would have a unique design, allowing it to perform well. After around a month of research and designing, we came up with a claw-machine kind of design for our robot. This design would require us to pick up the cubes from above rather than the side. The match requires the robot to pick up and stack cubes so we needed to have a base at the bottom to ensure that the cubes would be picked up.



Unfortunately, this design didn't work out. It took up too much space and it wasn't holding the cubes properly. After some more research, our team came up with a new idea. It used a double reverse six-bar to hold our claw (top right). This design had two arms, with another arm for support on the back, that converged to pick up cubes. This design was efficient at everything, from stacking on the high tower to scoring in the goal-zones. After designing, constructing, and finalizing our robot, we were finally ready to practice. It was already December and we had a competition soon. We didn't have time to program an autonomous for the actual match, so we all worked together to practice and coach each other. By the time the competition rolled around, we were ready.



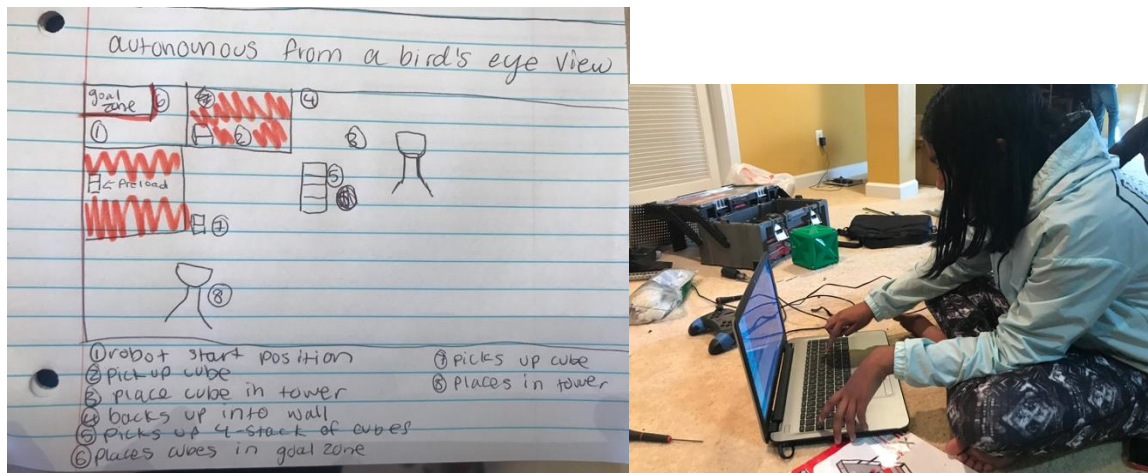
At our first competition, we were a bit surprised. We were the only team with mainly girls. I had seen three other teams that had girls in them, but they weren't the majority of their team. I knew that there were more teams with girls, just not at this competition. The lack of girls made it kind of hard for me and the other girls in my team to communicate with other teams, due to the fact they were all mainly boys. However, we eventually got over it and realized that we had to talk to other teams to secure an alliance. We ended up allying with the first-place team and we were the second-place team in the qualifying matches. We ended up winning first place in the competition. We also broke the state record for the highest tournament score twice in the competition. This is the photo we took when we won.



That was just our first competition. For our second competition, we had decided to work on our autonomous more for skills.

We had started to plan for a 12-point autonomous program on January 5th. Later on, we improved the autonomous on January 8th. The steps for the autonomous are as follow: First, the robot picks up the preload. Since it starts in between the goal zone and the red alliance mat, the robot can just move forward until it reaches the tower. It then backs up into the wall so that it can move forward and pick up the stack of four cubes in front of it. Next, it places the cubes into the goal zone. It then goes and picks up the other cube on the red mat. Finally, this cube is placed in

the other tower and gives us twelve points. Here is a bird's eye view of the field and the steps for the autonomous program.



Although this would be the end of my team's story, we still aren't done for the season. I believe we have taken on the girl power initiative. Our team has taken on challenge after challenge and we girls have been there every step of the way. We strived to learn more about robotics, and we strived to do well. My hope is for other teams to change as well. We have learned so much and we plan on applying what we learn to future competitions and in our later years as roboticists.

