

GREENWOOD ROBOTICS

Green Machine and Wired Woodmen
8791 and 8793

2021-2022

Robot Tank (pictured right)

On September 16, 2021, Green Machine attended Endress+Hauser's "RobotTank". All of the members got a chance to talk openly about what they do on the team to a panel of 3 judges. We used our Ultimate Goal robot to demonstrate all of our possible design options for the current challenge. To do this with last year's robot our programmers made a small autonomous program for the robot to show off what it had done the previous year, and explain how the present years robot could do something similar with the current game elements. Not only did we write the program, but each member also presented to the judges what they do on our team. Our presentation started with our builders explaining what types of parts they use, such as pre-made and custom built parts, then we talked about how CAD assists with the building and design of the robot, specifying that we get measurements and can design freely in CAD, and then transfer those to the actual robot. Next our programmers talked about how they use and apply flow charts, along with how Java programming is object oriented and is used to make our strafing easier. Then our documenter's talked about how and what they do to document all of the teams progress throughout the entire year. Our last presenters talked about how the four sections of our team interact with each other, specifically that we are usually located in separate rooms and we have to move around to talk to each other. After our presentation the judges came to the conclusion to sponsor our team and donate \$2,000 to our organization. Thanks to Endress+Hauser.



What are we doing?

The First challenge 2021-2022 requires teams to build a robot that can do a required task. Each robot can have a part that extends, however it needs to fit within an eighteen inch sizing tool. The robot must deliver rubber ducks to a loading dock, and wiffle balls and weighted cubes to a shipping hub or a "warehouse" marked with white tape. These tasks must be performed in a twelve foot, square playing field with a foam floor. At the same time the teams have to avoid running into another teams' robot. The match starts off with a thirty second autonomous period, during this time the robot goes off of pre-programmed codes to score points for the team. After this is the two minute driver controlled period, at this time drivers get to control the robots by using a remote control, during this time the two teams continue to score points for themselves. The last thirty seconds of the driver control period is called the "end game." The teams continue to score points until the timer goes off. The Wired Woodmen and the Green Machine are relentlessly reaching their goal to be the top team this year. Not only can you score points just from what your robot does, but rewards are also handed out for the best Engineering Notebook, and many other things!

Running Our Robot

We are proud to announce that this year's robot is the fastest that we've ever begun to run a robot. In years past, it has taken a little bit longer to get used to the robot, but we've actually already gotten our robot to move around and perform some minor tasks. Our team has been able to get the robot into the halls and to spin in circles. This is a promising sign for the rest of the year!

Isom Elementary Visit (pictured right)

At the beginning of our season our team Green Machine visited one of the four elementary schools, Isom Elementary School for their annual STEM night. We educated the elementary students and their families about STEM, FIRST, and our teams. We had some demonstrations of our robot from last year. Being the older team, it is our responsibility to make sure that younger children know about FIRST and how they can join. Also, we are being a representation of our sponsors, schools, and FIRST. We get into our community, show gracious professionalism, and teach others. We are the future of STEM related careers. We are here to promote, inspire, create, and innovate.



Fast Track backpack drive (pictured right)

On July 26, we went to a backpack drive at Westwood Elementary School sponsored by United Way. It was a great experience for all grade levels. We were packing backpacks for our students of low income families. Some of the supplies we packed were pencils, crayons, pens, highlighters, and notebooks. We packed about 120 elementary backpacks and over 200 backpacks overall. We had a great time having fun and helping the Greenwood community.



THE NEW MEMBERS ON OUR TEAM AND THEIR THOUGHTS

Annie Brinker- Annie is a little nervous about forgetting to write something down, that is important, so that she can put all of the information in the newsletter, but mostly she feels ready for the year and is excited to go to the competitions. She is also happy that our team has gotten the robot to work, and believes that it is a promising sign for the future.

Evan Foutz- Evan is excited to code and build this year, and feels that he is ready for the year. He feels when he needs to get something done he can get it done quickly. But while he feels ready for the year he feels like some of the members could maybe not play around so much and get their work done.

Gabriel Geis- Gabriel is not sure if he is ready or if he's not ready for the year but he thinks that our team will do good during the competitions. He also thinks that we will exceed and maybe get even better as the year goes on. Gabriel is most excited to make things for the robot.

Cooper Hall- Cooper feels ready for the year because he really like the people on CAD, he says that they are really nice and helpful. He also feel that our team is doing well because we have gotten a lot done with our robot. Cooper also feels that our team has done a good job with teamwork so far.

Nolan Stivers- Nolan is ready for the year because he really like his part on the team and he also feels that the people on the team are really helpful. He also wants to thank the members on the team for being so welcoming. He is excited to watch our team grow and get better throughout the year. Nolan also likes how our team is really good at working together.

Emma Tschopp- Emma feels ready for the year because of how well our team is working together to get things done, she is also happy that we are getting these things done quickly. Along with that she likes that our team is good at solving problems. Emma is most excited to build the claw for the robot.

Zachary Whenert- Zachary feels ready for the year because he enjoys coming to robotics and working on CAD. He is excited about getting to the competitions, but he says he thinks that we could do better during our meetings because right now we are acting a little crazy and not always staying on task.

Drew Nelson- Drew does not feel super ready for the year right now because he came here not knowing anything about coding, and then now he has to code one of the cameras for the robot. Of course he has help, but that is still hard for anyone, because it is a lot of pressure. Despite this, he is still super excited to learn how to code and he thinks that he has a team full of people who are good at working together and will help him throughout the process of coding the camera.

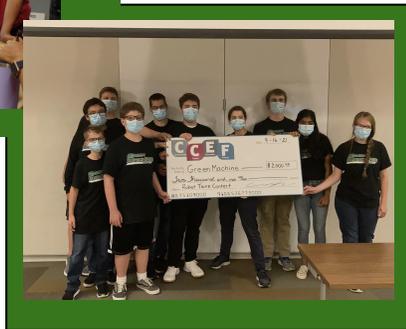
This year around 60% of our team is new!



Plans for the next Newsletter:

December-November

Every two months we plan to send out a newsletter with an account of what we have been doing. We will give an account on how our robot is doing and the competitions that will be coming up. Our first competition will be December 4th at Center Grove.



Thank You!



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