

NAMCC SUMMER ROBOTICS NEWLSTTER

MADE BY FTC TEAM CYBER SALAM #26903



THE WEEK AT A GLANCE

This week the classes were focused on completing their robots for the upcoming RoboOlympics competition. Teams consist of 3-5 kids and the missions come from the previous FLL season.

Today kids were focused on attaching lego attachments to the robot from last class and coding their robots to complete the mission. The mentors worked alongside the kids to help and guide them along the way.

The kids developed new ideas with each other and worked together to complete their missions.



WHAT'S NEXT

Moving forward, students will be focused on completing the missions they haven't completed yet, or working on missions in progress. This will include building new robot attachments, new code, and new ideas on how to complete the next missions within the two and a half minute time limit.

Students will also learn more about the engineering process as they progress with completing the missions. When encountering a problem, we will help them understand what it is and guide them through the questions they can ask themselves to get the right solution.

FUN FACT

Sub1 Reloaded

The Sub1 Reloaded robot is a robot made in 2016 that was designed to solve Rubik's Cubes as fast as possible. It broke the world record and solved one in under 0.4 seconds.

This robot uses many high-speed cameras to analyze the Rubik's Cubes starting position. The robot then uses its custom-built motors to solve the Rubik's Cube faster than the human eye can track!

ROBO RIDDLE

Answer to Last Riddle: A robot

I'm made of lines, but not a book.
I help machines know where to look.
Black and white, I sit so still,
But scan me once - I show my skill.
What am I?

ROBOTICS IN REAL LIFE

By: Abrar Nijam

Robotics in real life is seen everywhere. One place where robotics is needed for is creating chips. Chips are everywhere nowadays. You can find them from things like microwaves, to stuff like cars and computers. Have you ever wondered how exactly they are made? Well it's a complex process that starts with a material called silicon. Silicon is a semiconductor, that means it was engineered to flip between conducting electricity and not. But how does that silicon become the chips found in your phones? Well that's where robotics comes in. Robots do precise operations that etches a design into the silicon which has gone through multiple process before which were all done by robots. Robots are also the only things that are able to do these processes as they are very precise and need to be done in sterile environments





CLASS 1 HIGHLIGHTS

In our robotics class, most of the groups focused on the Shark Mission. It was great to see how each group communicated their ideas and refined their mechanisms to improve performance with each run. Because of this our teams are working on a direct arm attachment that connects straight to the motor on the Spike Prime hub. Instead of using gears or additional connectors, the arm is mounted directly onto the motor axle. This gives us more precise control and reduces lag in movement. They have tested a few designs already and are working on improving the stability and strength of the arm so it can handle the mission tasks reliably.

CLASS 2 HIGHLIGHTS

Class 2 worked to completed mission 02: the shark release. This involved pushing a platform down to release a shark. Teams brainstormed with different robot attachments but found that it was best to ram into the platform. The hard part of this mission was coding it to come back to home base to prepare the robot for the next mission. This is important because during the competition, teams will lose points for picking up their robot outside of their home base.



CLASS 3 HIGHLIGHTS

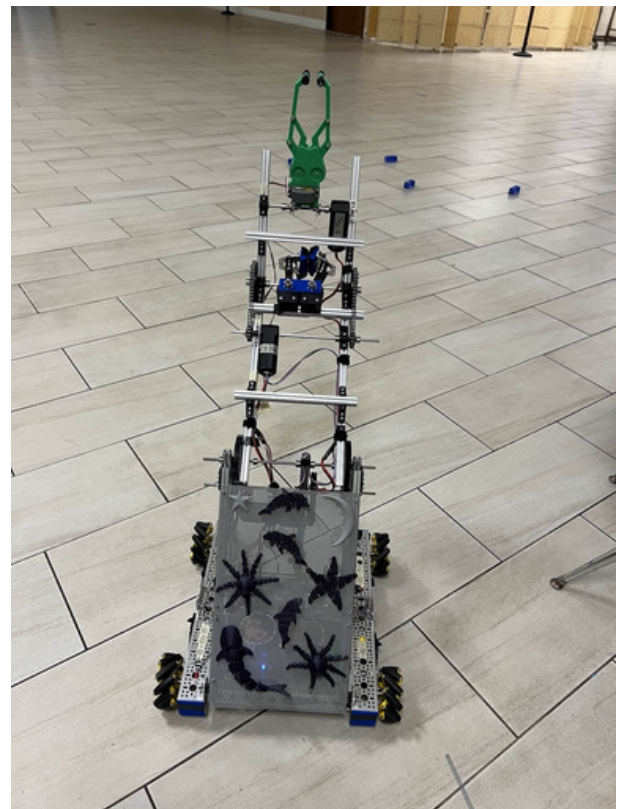
Teams worked on their RoboOlympics missions. They need to complete 5 missions in 2min 30sec period. Teams have been given rules for these missions in the previous class. All three teams from Class 3 finished at least one mission and many worked on their 2nd or 3rd missions. Most of the time in class was spent modifying robots for their missions or coding.

TEAM CYBER SALAM

Team Cyber Salam is a FIRST Tech Challenge Team with a mission to spread STEAM in our Muslim community. Our team aims to accomplish this mission by assisting NAMCC with their summer program. Our team competes from September to March working tirelessly to build a robot capable of completing the robot game in the best way possible. The robot shown to the right is one iteration of our robot during the season. Throughout the season, we won many accolades including second place in our area championships (also shown to the right). We are currently looking for new members to expand our team. Age ranges range from 8th grade through high school. The application process also consists of an in-person interview with the Cyber Salam robotics team at an assigned date.

WANT TO BECOME A MEMBER OF OUR FIRST TECH CHALLENGE TEAM?

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