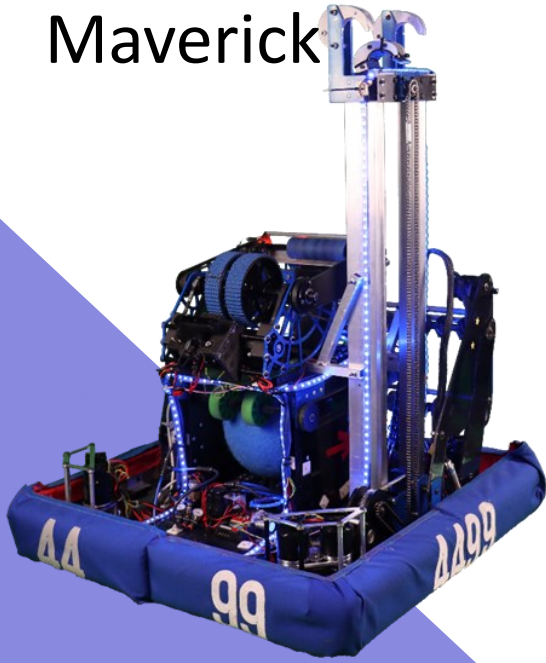


Our Robot: Maverick



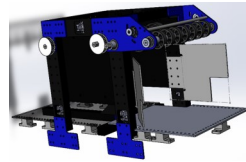
Our robot was designed fast cycle robot that can shoot in the high and low hub and with our adjustable hood we are able to have multiple shooting locations. We have a level 2 climber, with a level 3/4 climber coming soon.

Vision

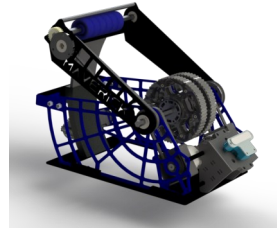
We also integrated vision recognition to the reflective tape by using a Oak D AI Depth camera. We send distance and angle to the Roborio and display the data to the drivers. We have also created Auto path generation using Custom PathGen tool and constant acceleration interpolation.



Our Mechanisms



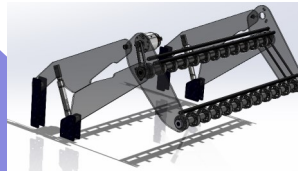
Feeder Mechanism



Shooter



Climber



Intake



Chassis

Thank You to our sponsors and Mentors!



We Couldn't Do This Without You!



FIRST team #4499

FIRST
ROBOTICS
COMPETITION

The Highlanders



We

are The Highlanders, Team 4499, a community-based team that began in 2013 through a 501(c)3 nonprofit, Neaera robotics in Fort Collins, CO. We are a team of 11 students from grades 8-12, from 5 different schools. We build a robot to meet a different challenge each year and compete in a robotics challenge put on by FIRST, an organization working to promote STEM education through cooperation — a combination of cooperation and competition — in students from ages 5 to 18. Our team's mission is to give children, from elementary through high school, the opportunity to experience STEM in real life, and to have fun building robots while we do it! 4499 students embark on a journey pursuing their STEM curiosity through hands on learning and our teams' Cycle of Success initiative (COS). COS is a peer-to-peer learning system where senior students and alumni work to teach younger students.

Outreach: FIRST



In our history:

- Helped run an FLL tournament for the 6th year in a row.
- Volunteered and demoed at 2 FLL Jr. expos.
- Held 4 FLL, 2 FLL Jr. and 1 Water Robotics Summer Camps
- assisted 13 FRC teams, 4 FTC teams; mentored 2 FTC teams, 3 FLLC and 10 FLE teams and started 5 FLE team
- We have had over 8 teams visit in the past 3 years.



Contact us at: www.highlandersrc.com

Outreach: Community



One of our favorite things has been marching in the 4th of July parade in Fort Collins. It's great to hear the kids (and adults!) cheer when the 2014 bot—still a crowd favorite—kicks that big ball down the parade route.

Over the past 5 years we have demonstrated our robots at more than 100 local events. Venues included our city science museum (3 times!), a mall, after-school camps, robotics showcases, FLL state and regional tournaments, and many local businesses.



"We just had our first qualifier yesterday! It was an incredibly fun and thrilling event! The team is happy about their performance, and the amount of learning, new event experience and interactions with other teams and the FIRST community was unimaginable. With this being our first in-person event, I certainly remember all of our expectations for how fun it is. We wanted to say HUGE THANK YOU to your team for helping us out with matching the parts we needed, we couldn't have done it without your help. Attached please find a little thank you note the team made at the event. The black side panels you helped make did great and survived through 11 rounds of intense action! Thanks again and good luck to FRC #4499 in your season!"



Thank you to all the teams and Colorado FIRST community for pulling together to help others. This truly shows the best of our Gracious Professionalism that we all know and love about FIRST.

email: teaminfo@highlandersfrc.com

Robot Disguise Day

We have worked hard to think of different ways to "spread the word" of FIRST and STEM. One of our favorites has been dressing our robots up and taking them out on the town.



Above is our 2017 robot dressed up as a dragon! We added the smoke for special effects!

We are always here to help teams in need. Especially when an FTC team lost their robot in a fire. We invited them to our shop and helped them re-make their parts!

Here is our Spider bot! We created this robot out of a practice bot, pool noodles and a bucket!



visit us at : www.highlandersfrc.com