

## **Team Overview**

OZone Robotics was founded by an Industrial Technology teacher at Olentangy Orange High School, & we began competing in 2013 with the Ultimate Ascent Game. Based in Lewis Center, Ohio, we aim to provide every student in the Olentangy Local School District with an opportunity to gain experience & apply STEM skills through FIRST Robotics. Our team is made up of students from 4 high schools: Olentangy, Olentangy Orange, Olentangy Liberty, & Olentangy Berlin High Schools. By bringing students from around the district together, we innovate as one team & collaborate under our district mission to build "One Olentangy." Our growth as a district has led to the rapid growth of our FIRST programs with us fully funding 1 FRC team & 6 FTC teams. Ozone's mission is to move "Onward & Upward," & achieving this mission requires us to push boundaries & challenge ourselves to make an impact in our community.

## **Building a Pipeline**

We prioritize providing all students in our district with an opportunity to take part in FIRST Robotics. We had supported FLL teams since 2018 & believed that making the jump to FTC was the logical next step. To achieve this initiative in 2021 we founded our first FIRST Tech Challenge team. We've since expanded to 6 FTC teams with students currently ranging from grades 6-8 that are fully funded & supported by OZone. We are pushing the boundaries in our physical space as these 6 teams gain resources to build highly competitive robots. These teams have competed in the Central Ohio FTC League & at other competitions in Ohio. Each FTC team has 8 students, & we've been able to form 2 all girl teams within our program. Understanding that the lack of female participation at the FRC level has been a concern for our team, we've made sure our FTC pipeline includes designated girl teams who can improve our team in the future. By making it a team priority to build a pipeline of robotics teams, we have been able to engage more students from our community. The increase in FTC participation has helped grow & boost our team's achievements. By integrating our FRC students as mentors to our middle school FTC Program, we allow collaborative relationships to form before students ever join our FRC team. We have also supported at least one FLL team since 2018. While these teams are more localized throughout our area & have fluctuated due to student involvement, we have supported them through mentorship & financial assistance. The success of our students at all levels of our FIRST program has helped us build longevity at the FRC level & create a sustainable flow of students year in & year out.

## **Supporting the STEM Future**

We know that it is crucial to engage the youth in our area with STEM learning and ensure access to it. We recognized a lack of available resources for robotics in the Olentangy community & have made sure that we are able to be a resource for our community. By reaching out to elementary & middle school students, we are actively supporting the future for STEM in central Ohio. Our most successful event in engaging youth has been our annual STEM camp called Camp OZone. This camp offers K-8 students hands-on STEM experiences including circuit building and designing cars

powered by mouse traps. We have engaged more than 400 students over 3 years, & we have seen involvement in our FIRST programs increase simultaneously. We've seen the positive impact of being involved in our community & have benefited from new students who are eager to learn about robotics.

By using our pipeline of teams as an asset, we can offer our community more options for all ages to be involved in STEM, whether it's coming to our camp, joining our FTC or FRC teams, or becoming a mentor, we offer a variety of options for our community to get involved. For the past 3 years we've presented at the Olentangy State of the Schools event, where we get to showcase our robot and FIRST programs to our district leaders & the broader community. Through our interactions with students & throughout our school district, we're able to stress the importance of STEM & share our message to our community. For us to move onward & upward, we must first interact & build a solid foundation within our team to allow us to create a dedicated support network to expand further.

### **Using Team Success as a Tool**

OZone has had the opportunity to attend the FIRST World Championship in 3 of the last 4 seasons. As we find our stride as a team, we have used our success to increase FIRST awareness in our community. With us first attending Worlds in 2022, we opened our eyes to how competitive FIRST can be, & we came back with a better understanding of what's necessary to be a premier team. After 2022, our team registration has increased by 30% & with this increase in participation, we have been able to continue our success at competitions & increase our team's involvement in our community. This season we've improved upon our team leadership infrastructure to emphasize student involvement & accountability, thus increasing our team's sustainability for the future. Our recent successes have given us opportunities to take part in radio interviews & be featured by local news outlets. By placing an emphasis on speaking about FIRST, our success has contributed to the growth of robotics in our community.

### **STEM For Everyone**

We recognized a lack of female participation on our FRC team, our mentorship, & in STEM careers. Identifying this concern during the 2023 season, we formed our first all girl FTC team & recruited new female mentors. We have since added a second all girl team, gained more female mentors for our FTC teams. We now have 16 FTC spots dedicated to increasing female participation & this has already increased our FRC female participation by 50% after just 1 year. We have increased our female outreach by helping Girl Scout troops with earning their Robotics badge. These events have helped with recruitment for these FTC programs & show these Girls the possibilities for them in robotics. We recently collaborated with our girl FTC team, OZone Yellow, to help with one of these Badge training sessions. This was a great to show these girls how important female inclusion is in Robotics. OZone Yellow is also one of our two FTC teams to qualify for the Ohio FTC Championships this year, & their success helped show the Girl Scouts how powerful girls in STEM can be.

### **Involvement in the FIRST Community**

Having 6 FTC & multiple FRC students working with them as mentors, we have increased our participation at FIRST events, this comes as an increase in our team's involvement in event volunteering. Two of our FRC & FTC mentors run the Central Ohio FTC League. Their experience running both the league & coaching an FTC team of their own has helped us increase our team's volunteering opportunities. Their experience has encouraged us to become more involved in volunteering in the league. Last year, we had 3 consistent volunteers working for the Central Ohio league, but this year our volunteering for FTC has grown by 300%. We had 9 team members and mentors volunteer at multiple league events.

### **Global Involvement through FIRST**

During the 2025 season, our team picked FRC team 9545: Caracal Robotics from Türkiye as our 2<sup>nd</sup> alliance selection at the Buckeye Regional. As the competition progressed, Caracal's robot ran into some wiring issues. Our team had a larger inventory of tools available & we offered students & mentors to help Caracal. With some minor code & electrical changes, Caracal qualified for Worlds at the Buckeye Regional & turned to us for more help. Instead of having them ship their robot back to Türkiye & risk not being able to ship it to Houston for the World Championship, we offered to store & transport their robot to Worlds. At their request, we also performed maintenance. We've also been able to build great relationships with teams around the world. In 2024 we helped team 9597 Luban Robotics make major code changes with their subsystems & provided them with a practice space prior to the Buckeye Regional. We've continued communications & built shared alumni networks. At the FIRST World Championships, we shared tools & build materials with team 4613 Barker Redbacks helping them excel at the competition. We've made it a mission to share our knowledge & resources with other teams that have allowed us to build great relationships around the globe.

### **Future Plans**

Our team has just begun to invest in our community. As we progress Onward & Upward, we want to expand our reach through Central Ohio. We want to use our role as a premier FIRST robotics team in Ohio to help bring our experience & expertise to more students across Columbus. We have a new goal to help several local School Districts around Columbus to start FRC teams. We believe that sharing our infrastructure can be a building block for new teams. We want to scale up Camp OZone to reach more students. We can also use this model for new community events like workshops & lessons. To help new teams, we want to continue to grow our FTC program, sustaining our pipeline & increase awareness about robotics in the Olentangy District. By being a beacon in the STEM world, we can positively influence our community; one student, one school, & one district at a time to continue our movement Onward & Upward.

### **Conclusion**

Our efforts to grow robotics by reaching parents, students, & educators around our community are purposeful. As we aim to scale up our mission, we have developed a solid foundation for sustainable STEM education. By leading the charge at the FTC level, sharing our strength & growth within our community & investing in current & future students, we have created a program that we are proud of that helps students in Olentangy excel. Becoming a resource for educators, parents & those within the FIRST community, we are committed to keeping robotics accessible to our community & inspiring every student to reach Onward & Upward.