

Chairman's Award - Team 3193

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2021 - Team 3193

Team Number

3193

Team Nickname

Falco Tech

Team Location

Austintown, Ohio - USA

Describe the impact of the *FIRST* program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in *FIRST* programs as mentors/sponsors.

About 90% of our alumni study either STEM or education, and almost 100% graduate from college or technical schools. Many have earned local internships at companies like Vallourec Star, RoviSys, Taylor Winfield, APTIV, and even Disneyland; they often engage in mentoring opportunities as well, like teaching in England or advocating for children's education programs in Africa.

Describe your community along with how your team addresses its unique opportunities and circumstances.

Our community, like many others, is constantly finding innovative ways to lift each other up in the midst of the pandemic. Whether it's volunteering to teach senior citizens to communicate with their loved ones through technology or packaging and sending LEGOs to kids in need of entertainment, Falco Tech has worked tirelessly to make a difference from a distance in our community. We are lucky to have a school district that supports our team and our mission, especially in times like these.

Describe the team's methods, with emphasis on the past 3 years, for spreading the *FIRST* message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?

Falco Tech aims to create engaging ways to expose a new audience to *FIRST*. Demo robots such as our T-Shirt Cannon and chair bot enable us to show STEM in innovative ways. Our chair bot, a reclining chair mounted on an old frame, compliments our t-shirt cannon by sparking interest in STEM. They fascinate all ages and provide interactive ways for our community to experience STEM up close. An increase in *FIRST* participation in not just our district but our community proves our ideas make progress.

Please provide specific examples of how your team members act as role models within the *FIRST* community with emphasis on the past 3 years.

In our community, Falco Tech is as recognizable as our football team. We showcase *FIRST* at events like parades, sporting events, and conferences. We encourage Jr. FLL, FLL, and FTC students to engage with the community. Oh! WOW Silly Science Sunday is a great way for anyone to learn how they can become involved with *FIRST* as we bring exhibits from each program. We also inspire adults that have no prior knowledge of *FIRST* to form teams of their own and volunteer at events around our community.

Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

We assisted in creating 2 FTC and 5 FLL teams, as well as a Jr. FLL team outside our school district. Last year, we created 18 Jr. FLL teams within our school district, amassing 130+ students. We also provide monetary support for teams that do not have the funds to support FRC. When Air Guardians 6460 couldn't support an FRC team, we pointed them in the direction of FTC. This move allowed them to still participate in FIRST, while saving funds to resume FRC competition in the future.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

Our team has been heavily involved in local STEM showcase events and programs for students of all ages. Our local Farmers Market and the OH! WOW! Children's Center for Science and Technology are just some of the many initiatives that have helped young people further their STEM interest and education. Over the past three years we have seen a higher interest in STEM programs and activities in the valley due to our influence and the influence of others we've assisted.

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

We've made connections through various community events with organizations in the city of Youngstown, including the local USHL Team the Youngstown Phantoms. At the hockey games, we shoot T-Shirts to the crowd and consequently stir up interest in STEM. Last year we helped start Team 8027 "Not the Droids You're Looking For" out of Sharon, Pennsylvania.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

Members of Falco Tech firmly believe in an open door policy; everyone, regardless of their race, gender, sexuality, religion, disability, is welcomed with open arms. Each member of the team has the opportunity to find the role on the team that best suits them, and everyone has equal opportunity to thrive and succeed. This season, 4 out of 5 new team members are female, two of which belong to other minority groups.

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future

By encouraging an equal, inclusive, accepting environment, Falco Tech provides a personal experience for every individual. We are constantly striving to give all members a safe space and place to call home, and in the future, we hope to share our goal within our district even further. Continuing to prioritize outreach with everyone in our community will propel Falco Tech for years to come.

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years

Falco Tech prides itself on being active with our sponsors, as well as retaining sponsors from year to year. These organizations not only support us monetarily, but they truly do establish connections with our team and its members, including providing internships for our alumni. We also hold demos at the APTIV Champion Technical Center during APTIV Days where we also present them with plaques to commemorate their continued support.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

While once including 50 members, robotics participation in our school has dwindled in previous years. In an attempt to grow our team, we've started various Jr. FLL, FLL, and FTC teams throughout our district to capture students' attention as early as possible. As students grow up as part of a FIRST team, their chances of high school participation increase. So far, our participation has increased in all four FIRST programs we offer.

Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.

Falco Tech's mission is to enrich people of all ages through FIRST, emphasizing volunteering and outreach, while teaching our community and beyond about the values of FIRST and STEM. We continue to make progress with each year, expanding our team and pushing the boundaries about what a robotics team "should" look like. Our team has only grown stronger as we bring in more members, and we look forward to what we will accomplish together in the future.

Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique or particularly noteworthy.

As the only team in the area with all 4 FIRST programs, we strive to be FIRST ambassadors who spread their message with compassion and expertise, inspiring all students to build a better world. Our team was forced to relocate our workshop after 11 years. Moving robots and materials while minding social distancing was difficult, but bonding while overcoming another challenge strengthened our team. 2020 taught us that even the little things in life are worth celebrating when we work together.

Essay

FIRST THINGS FIRST: OUR MISSION

Falco Tech's mission is to enrich people of all ages through FIRST, emphasizing volunteering and outreach, while teaching our community and beyond about the values of FIRST and STEM.

OUR SPONSORS: A NEW HOPE

Falco Tech prides itself on activity with our sponsors, as well as retaining sponsors from year to year. Our sponsors consist of the APTIV Foundation, AMTECH, Taylor Windson, Jet Stream, and Nordson. These organizations not only support us monetarily but establish true connections with our team and its members. Our sponsors are extremely involved with the success of our team and frequently visit our meetings during typical seasons. Through the ties they create with our teams, our graduating seniors are also given opportunities to intern within their companies.

Since the birth of Falco Tech, our team has only continued to grow. Our small team has expanded to include upwards of 35 students, and has flourished into an extensive program that encompasses our entire school district. Falco Tech is always extending a helping hand to everyone in our community; furthermore, we intend to uphold the tradition of being an integral piece of our community as time goes on, continually inspiring our community through FIRST and STEM.

FIRST FOUNDATION: A FALCO TECH STORY

Falco Tech goes beyond building robots. For the past 11 years, our team members have learned about the importance of volunteering, basics of communication, and foundations of leadership. Building bonds with our community and within our own team is just as important to us as building our robot.

Falco Tech is a family that leaves no student behind. We foster an environment where ideas are shaped into a reality, and at the same time encourage friendships that will last a lifetime. Our outreach events such as bringing our robots to hockey and football games double as team building opportunities. To promote an even warmer family atmosphere, our team takes time during build season meetings to eat together.

Volunteering, an integral pillar of our team since the very beginning, is the most effective way to stay connected with our community. Members of our team experience the benefits of volunteering, like teaching a young child to drive a robot or shooting t-shirts at a hockey game. Each unique experience allows us to form relationships with members of our community and beyond while spreading FIRST values to people who would never experience it otherwise.

THE FUTURE REBELLION: EMPOWERING WOMEN

Falco Tech constantly strives to break down the walls in terms of inclusion and equality, and we are hitting new milestones with every passing year. In each of the four FIRST programs in our district, our number of female students last year is at a steady incline. The trend has continued this season. 80% of our new members are female, two of which belong to other minority groups. In addition to this monumental milestone, we prioritize outreach with young girls through our work with Girl Scout troops to help them earn their robotics badge. The girls on our team aim to be strong, positive role models for the future generation of women in STEM.

THE FUN-TIME MENACE

Many unique outreach opportunities arise from our strong partnerships in our community. One partnership we have strengthened is with the Youngstown Phantoms of the USHL. Falco Tech frequently attends their hockey games to shoot t-shirts during intermissions, allowing spectators to experience FIRST in an interactive way. We also use our t-shirt cannon at high school football, basketball, and soccer games. Our most recent addition, our chair robot, is created from a reclining chair mounted on top of a practice robot frame. It has quickly become a fan favorite of children and adults alike. Due to our t-shirt cannon and chairbot, our team has become a staple at many events around our community, which gives us plenty of opportunities to spark interest in STEM.

RISE OF THE COMMUNITY

In order to truly inspire our community to engage in FIRST programs and STEM, our team demonstrates our robots at local parades, concerts, and sporting events. Over the past 12 years, our team has amassed over 37,000 hours of volunteering, totaling 500 hours in 2020. The pandemic meant volunteer hours were hard to come by. We attend a wide variety of events, allowing us to demo our robots to various crowds in our community and assist local organizations as well. We have volunteered at events including the Austintown Farmers Market, Relay for Life, Packard Museum, our local 4th of July Parade, Ohio FLL State Competition, Awesometown, NEOSTREAM Conference, YSU STEM Day, school pep rallies, Creative Arts Night, the Canfield Fair, the Akron District FLL Competition, Silly Science Sunday, and Pittsburgh and Cleveland FRC regionals. Last season, we gave the gift of FIRST with a neighboring county and volunteered at their premiere FTC competition.

We also encourage Jr. FLL, FLL, and FTC students to join us for community outreach. As the only school district in the tri-county area with all 4 robotics programs, including Jr. FLL Discovery, it is vital to showcase and expose all members of our community to the diversity of FIRST programs. At the Oh! WOW Silly Science Sunday event, our team connects robotics to the youth of our community with the help of team members from each of our programs. Since the infancy of the Oh! WOW organization, Falco Tech has helped spark interest in STEM around Youngstown and beyond. We continue to inspire students and foster this enthusiasm throughout our community.

THE IMPACT STRIKES BACK

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Falco Tech prides itself on our willingness to create new teams around our area. Since 2013, we have helped create 5 FRC, 2 FTC, 5 FLL, and 18 Jr. FLL teams throughout our community. We also operate 2 FTC teams, 4 FLL teams, and 18 Jr. FLL teams in our own district. We are always available to these teams to answer their questions, share our resources, and guide them through the design and construction process of their robots. We are always willing to assist rookie teams in any way we can to help make their transition into the robotics scene seamless.

Falco Tech also organizes a kickoff event each year with teams from around our area. Several teams gather to discuss various strategies on how to tackle the game each year. This event has allowed teams from around our area to create ties that would not exist otherwise. This year we continued our tradition and met virtually.

THE LAST JEDI: FIRST OF THE FUTURE

Today's children are tomorrow's leaders, and Falco Tech wants to teach them the importance of STEM through the principles of FIRST to help them thrive in these positions. 5 years ago, we started our Jr. FLL program to bridge our existing programs together. Our Jr. FLL participation has grown exponentially. This year alone, we were able to open up four new teams, growing our participants to over 130 students. Our FRC members are a major part in managing and mentoring the teams each week.

After 4 successful years with our FRC program in Austintown, we expanded our reach in 2012 to include an FLL program with four teams of middle school students. Our FLL program provides the next step in the ladder for any student interested in STEM. The students involved in the higher programs have vast amounts of experience to assist these younger teams.

Our FTC program was implemented in 2015 after 3 successful years of FLL, as both mentors and students noticed a gap between the FLL and FRC programs. With the addition of FTC, 8th and 9th grade students are given the opportunity to learn skills necessary for the FRC program. Many of these mechanical based skills are completely new for FTC students; these transitional years allow them to become familiar with the aspects of designing, building, competition, and teamwork, which are all imperative to future participation.

THE COMPETITION AWAKENS

Hosting FIRST qualifying and off season events is another way we involve our community. We annually host an FLL and FTC regional event. Additionally, we've added Jr. FLL expos to our ever-growing list two years ago. All three events give the community amazing opportunities to see the impact of FIRST in action. Concurrent with the regionals we host, we co-host an off season FRC competition every year along with other Northeast Ohio FRC teams called the Mahoning Valley Robotics Challenge. The event is held in Austintown every other year and allows our community to witness robots they see at other outreach events actively competing in the game they were created for.

RETURN OF THE ALUMNI

Falco Tech is extremely proud of our alumni implementing their skills during their college years and beyond. About 90% of our alumni study either STEM or education, and almost 100% graduate from college or technical schools. Our alumni are pursuing successful paths in their lives; many have earned local internships at companies like Vallourec Star, RoviSys, Taylor Winfield, APTIV, and even Disneyland; they often engage in mentoring opportunities as well, such as teaching in England, advocating for children's education programs in Africa, working towards a PhD at UMass Amherst, and providing speech therapy for children. No matter what our alumni pursue, we aim for their time with Falco Tech to benefit their futures with valuable lessons and skills they can use for the rest of their lives. Our alumni also stay involved and in touch as they begin their own FIRST teams and often revisit to check in on the team and volunteer at events.

OUR ONLY HOPE

Our community, like many others, is constantly finding innovative ways to lift each other up in the midst of the pandemic. Finding volunteer opportunities was difficult, but whether it's teaching senior citizens to communicate with loved ones remotely or packaging and sending LEGOs to kids in need of entertainment, Falco Tech has worked tirelessly to make a difference from a distance in our community.