TEAM NEUTRINO #3928

2023 Pit Binder

For more information, visit

TEAMNEUTRINO.ORG @ FRC NEUTRINO

TEAM NEUTRINO

Team Mission

TRAINING FUTURE ENGINEERS

Team Neutrino's mission is to develop ourselves as leaders, engineers, and community partners, working every day to achieve more with our robots, in our community, and from ourselves than we did the day before.

Our program is designed to prepare students for a career in STEM and since 2011, **81% of Team Neutrino alumni have pursued a STEM career.** On our team, material learned in the classroom is practically applied in an environment that gives high school students the hands-on opportunity to solve real-world STEM problems. What began as 9 Ames High School students in 2011 has become a team of 30 Story County students who reach 20,000+ community members each year through countless events, demonstrations, camps, and more. Since 2014, we have mentored 100+ elementary and middle school robotics teams.

TEAM NEUTRINO

FIRST Mission

WHAT IS FIRST ROBOTICS?

FIRST is a non-profit organization that designs fun, motivational programs to help young people in grades K-12 discover and develop a passion for Science, Technology, Engineering, and Math through challenging robotics competitions.

The mission of *FIRST* to inspire youth to be the science and technology leaders of tomorrow by engaging them in exciting Mentor-based programs that build their skills, inspire innovation, and foster well rounded life capabilities including self confidence.

TEAM NEUTRINO

2023 CHARGED UP

PLAYING 2023'S CHARGED UP GAME

In CHARGED UP presented by HAAS, two alliances are competing to score cubes and cones into their grid. Each alliance can score in the high, medium or low nodes specific to their respective cargo. Human players dispense the cubes and cones to the robots through portals. In the final moments of each match, alliance robots race to the charging station to "charge up" their community.

CHARGED UP SM

PRESENTED BY HAAS Gene Haas Foundation

TEAM NEUTRINO
Safety Overview

TEAM NEUTRINO SAFETY

Promoting a culture of team safety is critical to all pillars of Team Neutrino. The team strictly enforces safety glasses and other appropriate PPE when in the lab or operating tools, and always has a well-stocked first aid and fire extinguisher in all areas. All members complete comprehensive Iowa State University Safety training, and all safety incidents are reported to the Safety Captain. A two mentor policy and sign-in sheet for our workspace ensures accountability.

#3928 Team Neutrino
TEAM HISTORY

TEAM NEUTRINO

History of Team Neutrino

FOUNDING A LEGACY

Team Neutrino began with one of our students being invited to attend the Minnesota North Star FRC Regional by her grandfather, a mentor on team 2977, Sir Lancer Bots. After being inspired by the mission, community, and the competition, she became part of the *FIRST* community by founding the first FRC team in her area. She was put in contact with a student at Iowa State University coincidentally looking to start a FRC team. It was a partnership made in heaven.

After establishing an ISU workspace and rookie funding via local grants, the team was ready for students who wanted to compete in 2012's Rebound Rumble. When the season was over, Neutrino was invited to join the Story County 4-H Program as Iowa's first 4-H FRC Team. 10 years, 2 Chairman's Awards, and 2 Regional Winner Awards later, Team Neutrino is thriving with 30+ members and a crew of dedicated mentors from local programs and businesses dedicated to competing at the highest level of Rapid React.

In 2012, the team competed at the Midwest Regional. At the Midwest Regional the team was ranked 8th, and learned a lot about competing in the *FIRST* Robotics Competition as a returning team in 2013.

2012

"It was a partnership *made in heaven*."

TEAM NEUTRINO
2013-2015

In 2013, the team competed at the North Star and Greater Kansas City regionals. At the Greater Kansas City Regional, the team was ranked 9th and received the Excellence in Engineering and Finalist awards. At the North Star Regional, the team finished as 1st seed and won the Innovation in Control and Finalist awards. The team was honored to participate in the Indiana Robotics Invitational with 68 of the top ranked teams in the world.

In 2014, the team competed at the North Star and Greater Kansas City regionals. At the North Star regional, the team was awarded Engineering Inspiration. At the St. Louis Championship, the team was picked to be the 4th robot on the 4th seed alliance (in the Newton division), and ended up ranking as semifinalists.

In 2015, the team went to the Central Illinois and North Star regionals. The team placed as quarterfinalists in both, and team member Dagney Paskach won the Dean's List Finalist Award at North Star. During the off-season event CowTown ThrowDown, the team won the event as a 1st pick on the alliance.

THROUGH THE YEARS

TEAM NEUTRINO
2016-2018

In 2017, Team Neutrino went to the Minnesota North Star regional and the Iowa regional. The team was a quarter finalist at Iowa and a semifinalist North Star. At Iowa, team member Rucha Kelkar won the Dean's List Finalist Award. At North Star, Team Neutrino won the Chairman's Award. In the offseason, the team competed at the East Metro Cooperative Competition.

In 2018, Team Neutrino went to the Seven Rivers Regional and the Iowa Regional, where they were the 2nd seed alliance captains, finalists, and recipients of the Engineering Inspiration award. This qualified the team for the World Champs in Detroit, where they were the 7th seed alliance captains and quarterfinalists.

THROUGH THE YEARS

TEAM NEUTRINO
2019-2021

In 2019, Team Neutrino attended the Iowa Regional, Seven Rivers Regional, and the Detroit World Championships. At Iowa, the team was seeded 3rd, with Nitzan Friedberg named a Dean's List Finalist and the team winning the Quality Award. At the Seven Rivers Regional the team won the Engineering Inspiration Award.

In 2020, Team Neutrino attended the Greater Kansas City, and qualified for the cancelled World Championships (in addition to the Iowa Regional). At the Greater Kansas City Regional, the team ranked 3rd and captained the winning alliance, in addition to winning the Engineering Inspiration Award.

In the 2020 remote competition season, the team seeded 1st at the Midwestern Plains district and 17th globally. At the Midwestern Plains District, the team won the Regional Chairman's Award, the Autonomous Award, the Skills Competition Winner Award, semi-finalist in the Innovation Challenge Game Design Challenge (Designer's Award), with Quinn Margrett named a Dean's List Finalist.

THROUGH THE YEARS

TEAM NEUTRINO
2022-2024

In 2022, Team Neutrino attended the Iowa Regional, North Star Regional, and the Houston World Championships. At the Iowa Regional, Team Neutrino won the Engineering Inspiration Award along with Leslie Kim being named a Dean’s List Finalist. At North Star, the team was seeded 4th, as well as winning the Chairman's Award and regional competition. At the Houston World Championships Team Neutrino won the Engineering inspiration award and the FIRST Dean’s List Award (Leslie Kim).

THROUGH THE YEARS

#3928 Team Neutrino
MEET THE TEAM


3928


JOHN DEERE
Des Moines Works


NEUTRINO


Team Neutrino


TEAM NEUTRINO


IOWA
I ♥ COMPUTER SCIENCE


CHAIRMAN'S
AWARD


NASA Iowa Space Grant Consortium &
Blue Origin Foundation
Make a Mars Helicopter


Des Moines Maker Faire
NEUTRINO
3928


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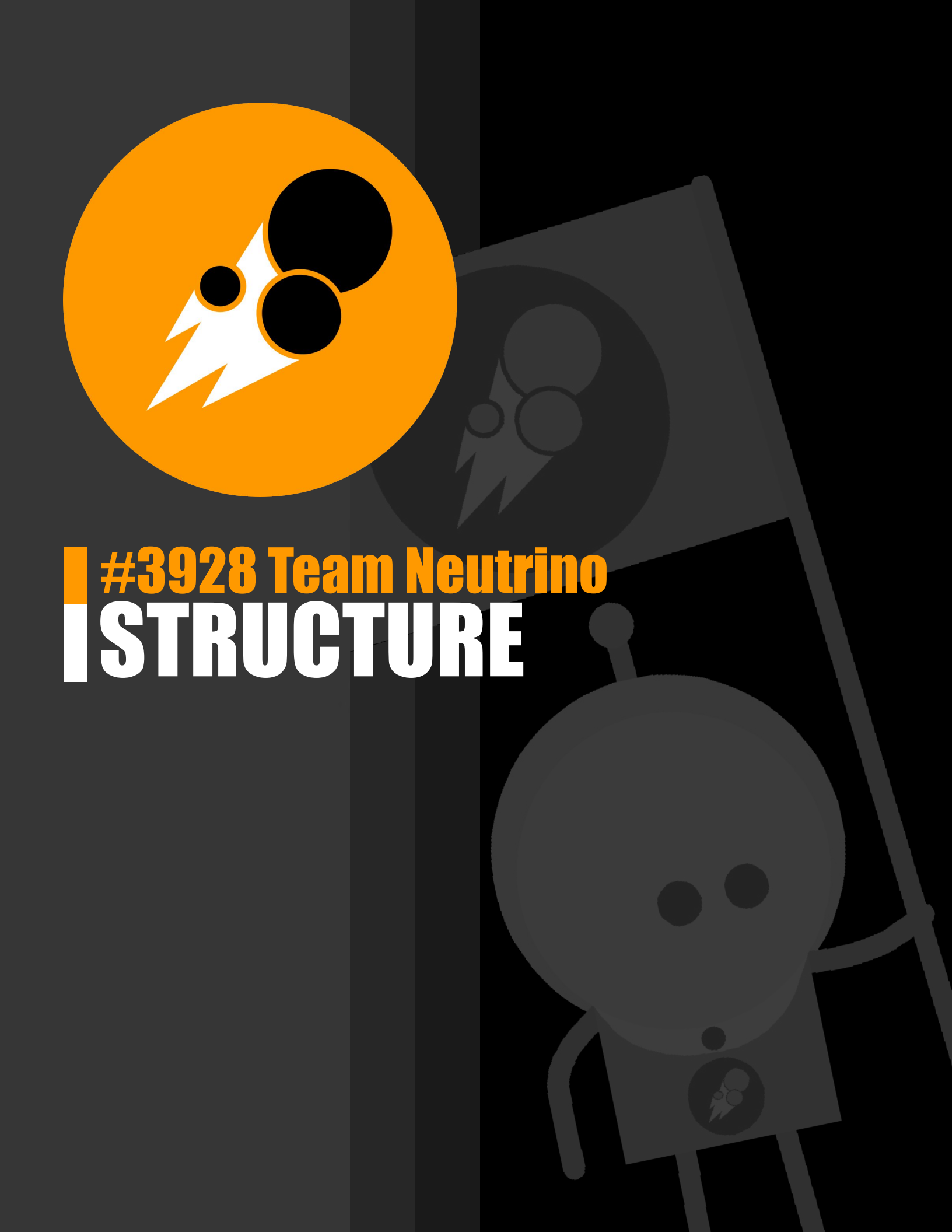


#3928 Team Neutrino
STRUCTURE

LEADERSHIP CORE

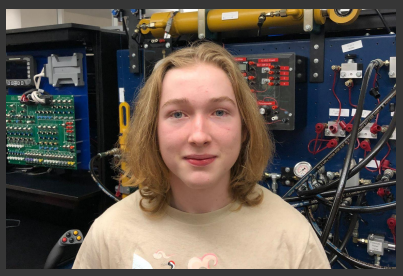
Leadership Core is a group of students, managers, and lead mentors who are heavily involved in the team's decision making. Team members become part of the Leadership Core through an application process and are appointed by the Captains. LC works to make full team organizational decisions in a transparent way, oversees team activities (e.g. recruiting efforts, fundraising efforts, sponsor communication, sustainability), and aims to encourage deeper student leadership and participation.

2022-2023 Members

STUDENT LEADERS

Captains: Leslie Kim and Mikayla Lauritsen

The Team Captains oversee all the happenings on the team, focusing both on the technical and non-technical subteams. Both Captains work together to ensure that the work within subteams is well spread out between students and all awards submission, graphical tasks, and design projects are making headway and meeting deadlines. The Captains need to be organized and efficient to ensure all parts of the team run smoothly. The Team Captains institute the values of FIRST.



Safety Captain Anton Ludes-Bedell

The Safety Captain makes sure that all team members and mentors are following *FIRST*'s safety guidelines, as well as safety guidelines outlined by 4-H, Boyd Lab and Iowa State University. Anton is the main representative to ensure machine training and safety for all members.

Design Manager Lyra Hascall

The Design Manager oversees the CAD design, prototyping, and manufacturing of the team's robot. It is Lyra's responsibility to help with design projects and decisions and delegate duties out to members, as well as reporting progress to the team Captains throughout the season.

Manufacturing Anton Ludes-Bedell

The Manufacturing Manager oversees the manufacturing of the robot. It is Anton's responsibility to ensure parts can be manufactured correctly and in a timely manner, and to train the underclassmen of the team on how to safely use manufacturing equipment.

Webmaster Cale Winenger

The Webmaster ensures that the team's web presence is up-to-date by regularly adding posts on our website. Cale's primary responsibility is to maintain, update, and revise the website to provide professional resources about the team (including managing public press releases).

Controls Manager Cale Wineinger

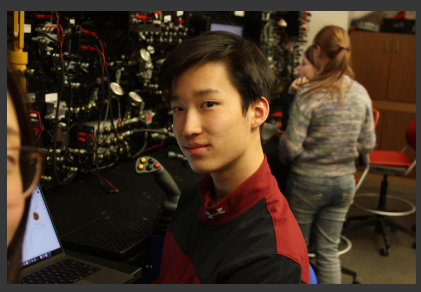
The Controls Manager oversees programming and the wiring of the robot. It is Cale's responsibility to lead coding projects, delegate tasks for programming and wiring of the robot, and to report progress to the team Captain progress throughout the season.

Awards Manager Logan McLain

The Awards Manager is responsible for overseeing all traditional award submissions, including the Chairman's Award. In addition to maintaining comprehensive awards documentation, Logan manages award timelines and presentations, and trains underclassmen about the process.

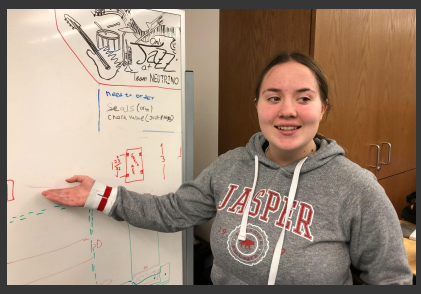
Fundraising Manager Leslie Kim

The Fundraising Manager is in charge of submitting grants, grant reports, managing incoming awarded grants, and maintaining sponsor relations. Leslie also maintains the overall team budget and acts as the primary contact for sponsors and community partners.



Graphics Manager Adam Zhu

The Graphics Manager is in charge of the team's image and making sure that the team image is recognizable and consistent from year to year. Adam oversees the production of printed materials, video content, and social media publications.



Outreach Manager Becky Murphy

The Outreach Manager is in charge of organization and documentation of all outreach events, and acts as an ambassador for new community events and connections. Becky maintains local relationships and establishes new community outreach opportunities for the team.

#3928 Team Neutrino
MARKETING

TEAM NEUTRINO
Team Branding

BRANDING THROUGH SOCIAL MEDIA

As an extension of our apparel and in-person branding (including printed materials, such as this binder), Neutrino utilizes official Instagram, Twitter, Facebook, and YouTube outlets to promote team interests, communicate directly with sponsors and partners, supply basic *FIRST* recruitment information, and promote team events and digital outreach initiatives. Upholding our detailed branding elements (as detailed in our Identity Standards) has seen a drastic improvement in overall effectiveness.

The Identity Standards can be found printed separately in the pit— take a look!

@FRCNEUTRINO

SPONSOR LETTER

TEAM NEUTRINO
FIRST Robotics Team #3928

To our business community,

My name is __name__, and I am the fundraising manager of of *FIRST* Robotics Competition (FRC) Team Neutrino 4-H #3928. I received your contact information from __website/person__, and was hoping to connect with you and your business about a potential sponsorship. I've included a short introduction to the team below, and we would additionally love to send a few members to stop by __business name__ at your convenience to visit with you personally.

Team Neutrino is a 4-H 501(c) non-profit robotics program made up of high school students from all around Story County who learn hands-on STEM (Science, Technology, Engineering, and Mathematics) skills through the *FIRST* Robotics Competition— a challenge where students build a robot to complete tasks and compete against other teams at three-day competitions.

Team Neutrino is designed to prepare students for a career in STEM and since 2011, 85% of alumni have pursued a STEM career. In our program, material learned in the classroom is practically applied in an environment that gives the next-generation STEM workforce invaluable hands-on opportunities. Often, our alumni even engage with local STEM employers after graduation, utilizing their robotics education. We're also one of the driving volunteer organizations in the Ames community— each season, we reach 20,000+ individuals through our 1,700+ volunteer hours a year, including countless local demonstrations, conferences, annual STEM camps, and mentorship of partner programs. *Ultimately, our program can disseminate your brand to all pillars of our community.*

All contributions directly fund registration costs, travel expenses, mechanical parts and costs, tool replacement, and outreach supplies for our non-profit. If we reach our annual goal of $40,000, we will use it to cover the costs of registration ($8000 for two regionals), travel expenses ($14,600), robot parts and miscellaneous costs and preseason projects ($8400), and outreach funds and supplies ($4,000). We hope to qualify for the Championship Event in Detroit, which would require us to raise even more money ($5000 for Championship registration). We recognize sponsors in the following ways based upon donation levels:

Support Options

Champion Support ($10,000+) XL logo on robot, banner, pit, team shirts, and mention in team displays and literature, special mention in all social media, video, and other media releases

Diamond Support ($5,000+) Large logo on robot, banner, pit, team shirts, and mention in team displays and literature

Platinum Support ($2,500+) Medium logo on robot, banner, pit, team shirts, and mention in team displays and literature

Emerald Support ($2,000+) Small Logo on banner, pit, team shirts, and mention in team displays and literature

Gold Support ($1,000+) Small Logo on banner, pit, team shirts, and mention in team displays and literature

Silver Support ($500+) Small logo in pit, team shirts, and mention in team displays and literature

Bronze Support ($250+) Mention in team displays and literature

Special Mentions ($50+) Mention in team literature

Please let us know how we can best connect with you and answer your questions! We'd be more than happy to send students to speak with you personally.

__Name__
FRC Team Neutrino

Ames, Iowa **www.TEAMNEUTRINO.org**

A letterhead was designed and used on team documents. Above is a letter used to inform businesses about sponsoring Team Neutrino.

TRI FOLD PAMPHLET

FIRST ROBOTICS COMPETITION

For Inspiration and Recognition of Science and Technology.

The mission of FIRST is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

Founded by Dean Kamen in 1989, *FIRST* develops accessible, innovative programs to motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills.

For more information, visit
FIRSTINSPIRES.ORG

For more information, visit
TEAMNEUTRINO.ORG

TEAM NEUTRINO
FIRST Robotics Team #3928

For more information, visit
TEAMNEUTRINO.ORG

CHARGED UP

The robot below was designed to play 2023's Charged Up game! In this challenge, teams must use their robot to place cones and inflatable cubes on three tiered nodes. During endgame, robots will try to balance on a teeter-tottering platform called the charging pad.

TEAM NEUTRINO

Team Neutrino faces the exciting challenge of building a robot to compete in *FIRST* Robotics Competition events. The team is composed of high school students from Story County who design, build, and program a robot to complete each year's challenge (released in January).

While working alongside mentors at their build space at Iowa State University, students solve problems and learn about the field of engineering. Beyond the competition field, students are responsible for marketing the team, creating a positive team image, designing a website, fundraising, and hosting community events. Team Neutrino students volunteer their time to community events such as team-developed summer camps, robot demonstrations, and community service projects.

FIRST ROBOTICS COMPETITION

FRC is a unique varsity sport designed to help high schoolers discover how interesting and rewarding the lives of engineers and scientists can be. Students gain the technical skills, professionalism and self-confidence that all but guarantee them extraordinary career opportunities.

Last season, Team Neutrino triple-qualified for Championships! This was done by winning Engineering Inspiration at the Iowa Regional and then winning Chairman's and the robot competition at the North Star Regional! At Championships, Team Neutrino won Engineering Inspiration, prequalifying them for this year's Championships!

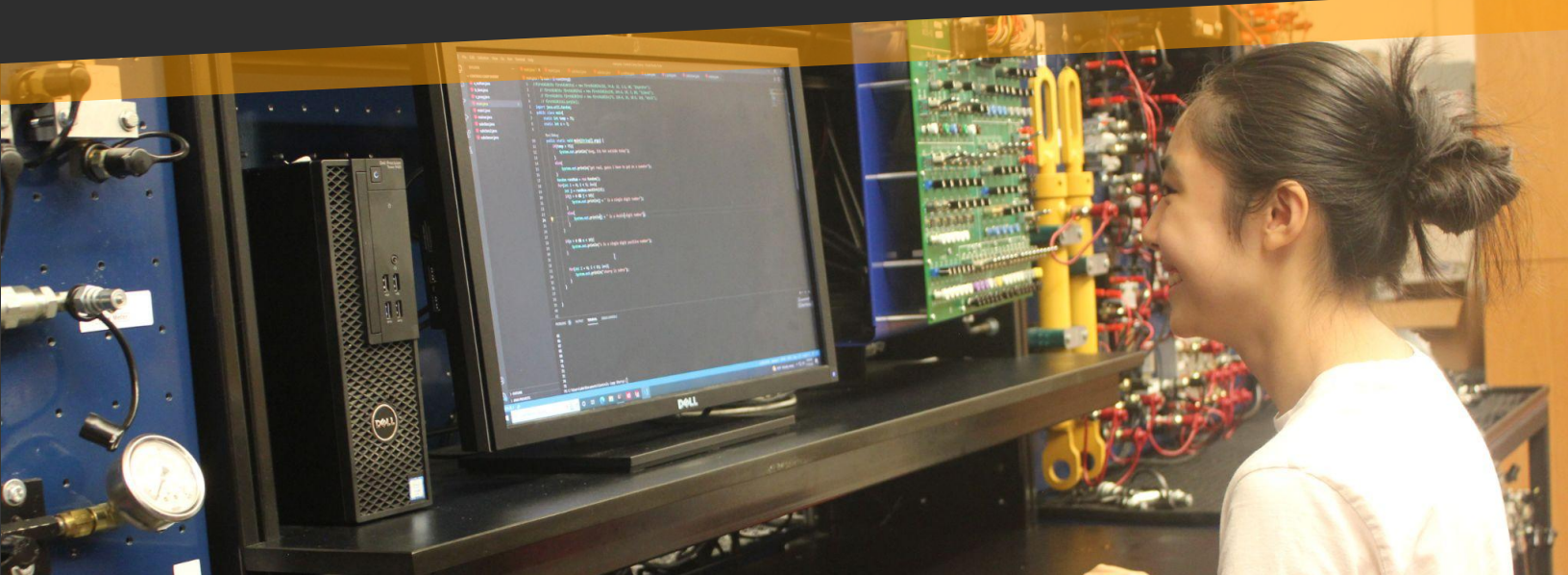
This brochure was developed as a way to educate the community about our team, FIRST Robotics, and the Mission of FIRST. It details out accomplishments of the now-completed 2022 season.

#3928 Team Neutrino
PRE-SEASON 2022

TEAM NEUTRINO
Training Camps

LEARNING NEW STEM SKILLS

Between the 2022 and 2023 seasons, Neutrino hosted training camps where new and existing members alike can deepen their knowledge and skills in various aspects of the team. These camps centered around teaching the basics of **graphic design**, **outreach planning**, **prototyping**, **CAD**, **manufacturing**, **programming**, and learning **electrical** and **pneumatic** systems. New members learned essential skills prior to the build season to get an invaluable head start.



TEAM NEUTRINO
Training Camps

TRAINING CAMPS 2023

Outreach Camp // June 6-9

Prototyping Camp // June 6-10

Manufacturing Camp 1 // June 13-15

CAD Camp 1 // June 27-30

Graphics Camp // June 27-July 1

Manufacturing Camp 2 // July 6-8

Programming Camp // 11-15

CAD Camp 2 // July 18-22

Electrical Camp // July 25-27

Manufacturing Camp 3 // August 1-3

Awards Camp // August 2-3

TEAM NEUTRINO

Cow Town ThrowDown

CTTD OFFSEASON COMPETITION

Cow Town ThrowDown was a great opportunity to give new members their first look at how Team Neutrino competes at a competition, as well as refreshing returning members for the season ahead. Neutrino's mechanical and design teams were able to evaluate how to improve our design for 2022's game (durability, drivability, etc, etc). Neutrino's scouting and strategy had a great time connecting with other teams as we extended our knowledge.

TEAM NEUTRINO
Mock Kickoff

MOCK 2023 KICKOFF

To simulate how kickoff operates every January, Neutrino hosted a mock kickoff for all of its members and mentors. Using 2013's *FIRST* Ultimate Ascent as a demonstration, new members learned how to strategically evaluate new FRC games, as well as how to facilitate helpful full-team discussions. After brainstorming our strategy for 2013's Steamworks, comparing our findings to elite level gameplay from 2013 gave us insight into how gameplay evolves and how to best predict the most effective way to play and design a competitive robot.

#3928 Team Neutrino
BUILD SEASON 2023

TEAM NEUTRINO
Kickoff

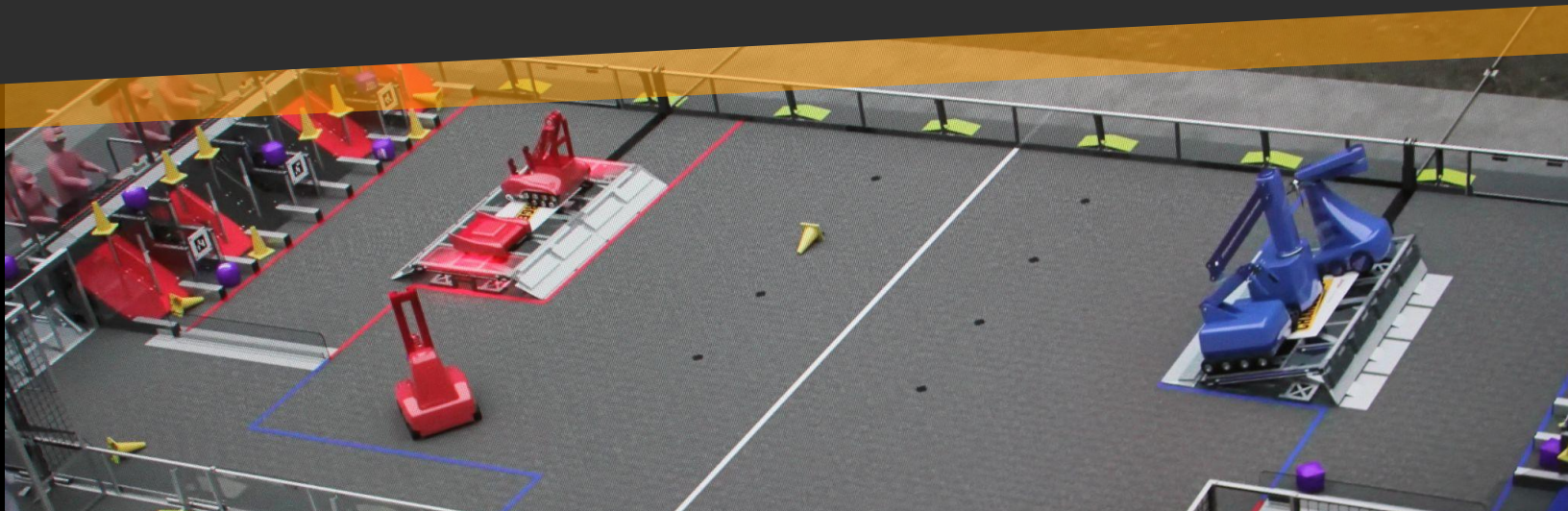
2023 KICKOFF EVENT

Kickoff marks the start of the six-week build season, when the team watches the live stream game announcement, reads the game manual and begins planning for the new FRC game (2023's CHARGED UP). This year we mapped out the Charged Up field, brainstormed robot archetypes as a group, and applied our new understanding of gameplay from the mock kickoff.

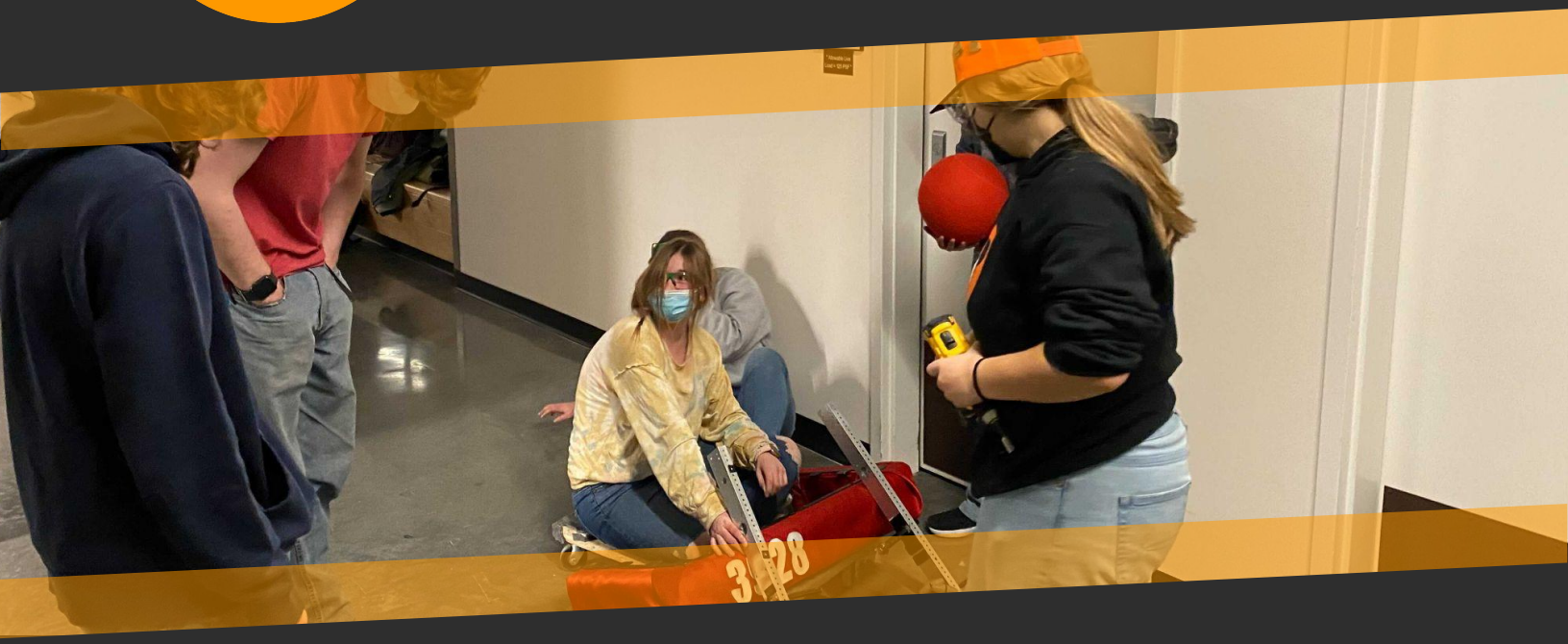
TEAM NEUTRINO
Subteams

SCOUTING SUBTEAM

Immediately after kickoff, the strategy team got to work simulating matches, discussing scoring strategies, and analyzing the Charged Up manual and robot rules. The strategy/scouting team has developed an app-based scouting system to make scouring opposing robots more intuitive and efficient at regional competitions. This date will directly influence our pick list.



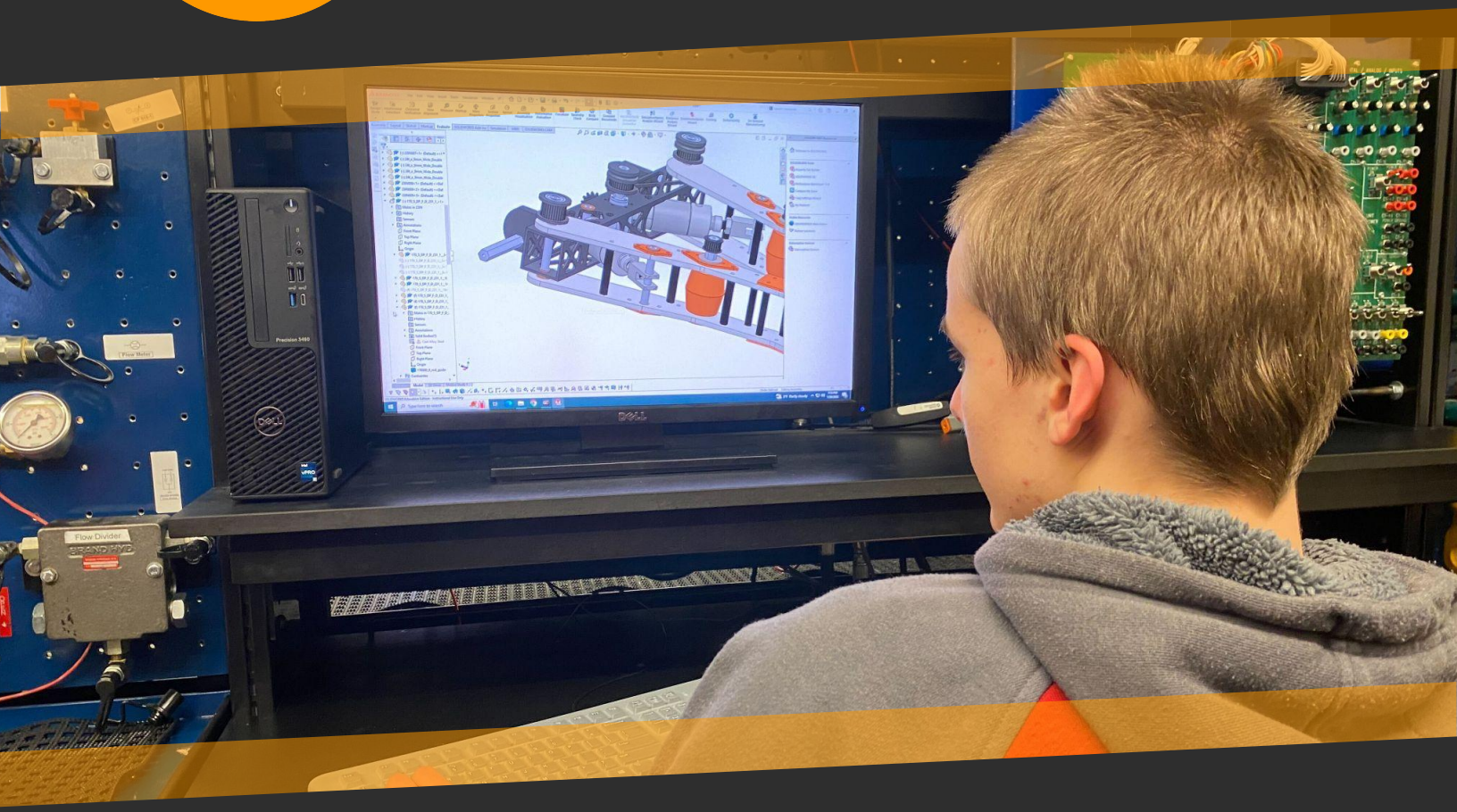
TEAM NEUTRINO
Subteams



PROTOTYPING SUBTEAM

Once our scouting team determines what our best route to success is with our given resources, prototyping tests and refines potential mechanism through prototyping before final production. Based on their findings, CAD begins work on whatever archetype proofs the most functional.

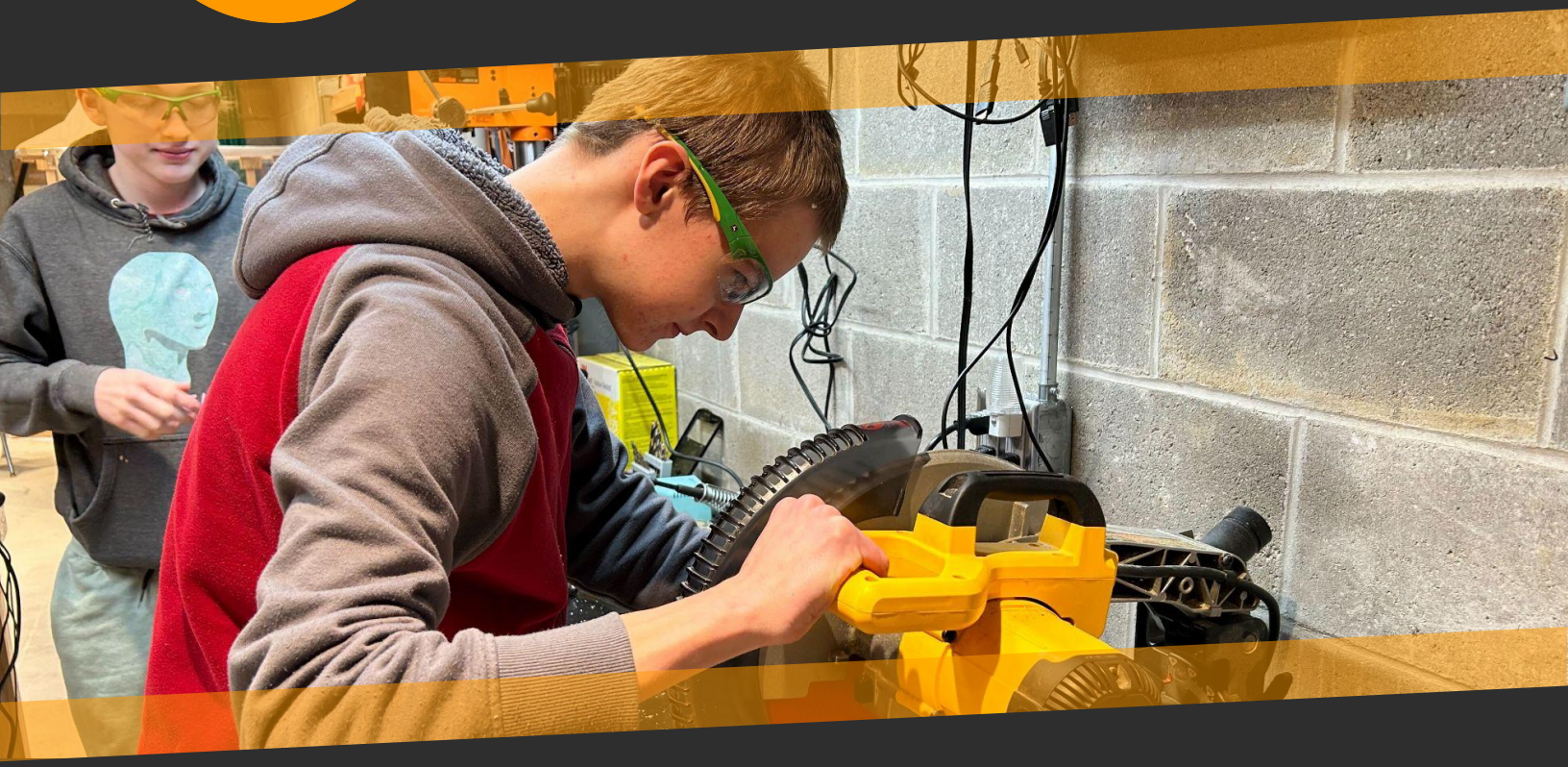
TEAM NEUTRINO
Subteams



CAD SUBTEAM

Students design this year's Charged Up robot in Solidworks, a 3D computer modeling program. Once our design is finalized by the prototyping team, the CAD team gets to work turning it into a manufacturable design and ensuring its geometry works (e.g. how it balances during endgame and what angle scoring should maneuver).

TEAM NEUTRINO
Subteams



MANUFACTURING SUBTEAM

After Neutrino's robot CAD is assembled and functioning, the subteam passes their files off to the manufacturing team to turn to reality. The team uses everything from Neutrino's CNC machine to our Fortus 250MC 3D printer to manufacture specific custom parts. The subteam primarily works out of Iowa State University's Boyd lab alongside experienced ISU mentors.

TEAM NEUTRINO
Subteams

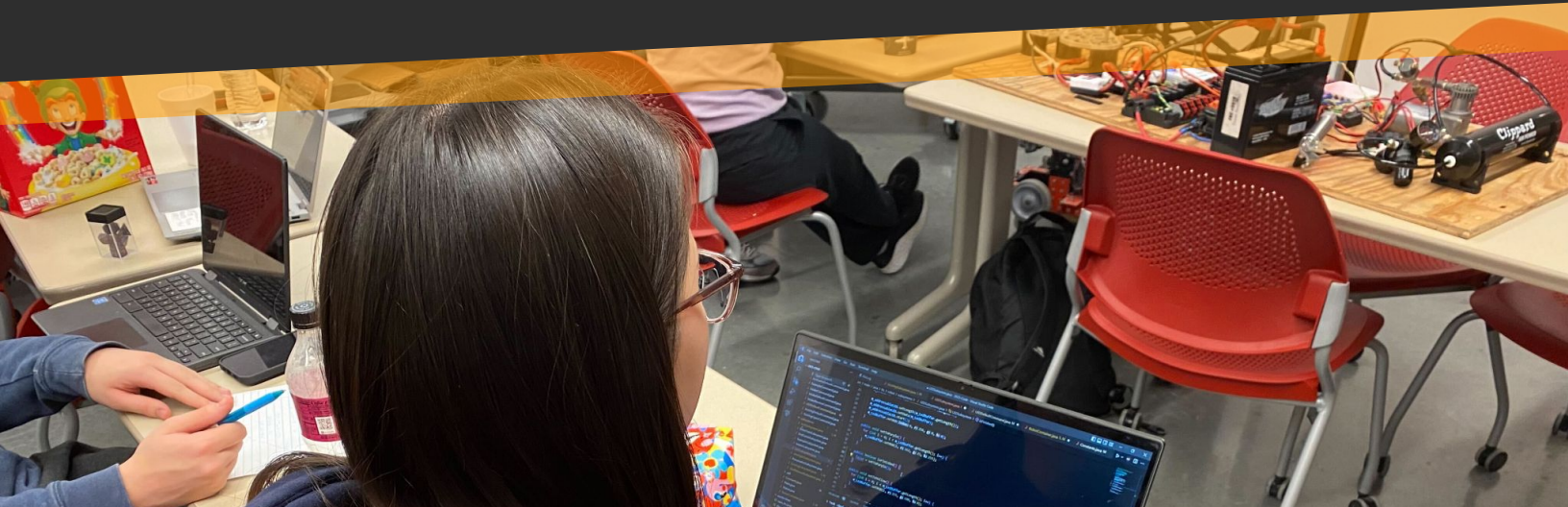
ASSEMBLY SUBTEAM

With the completed set of robot parts in-hand (plus backups!) the assembly subteam works to produce a robot which is durable and full wired for competition use. Assembling the robot involves frequent testing, revising, and retesting.

TEAM NEUTRINO
Subteams

CONTROLS SUBTEAM

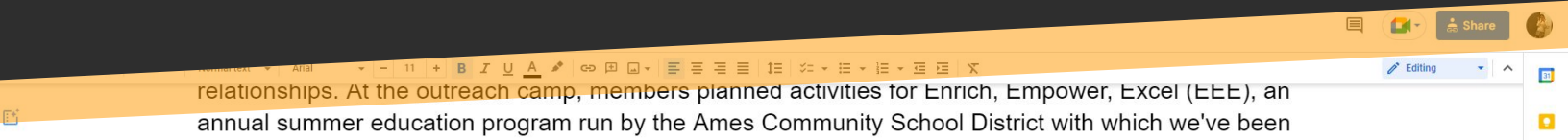
As Neutrino practiced driving our Rapid React robot, the controls team was hard at work programming and testing our autonomous scoring ability. Beyond autonomous, controls assists in Java automated tasks such as our hub aiming, and ensures the robot's systems are tested and working smoothly by competitions.



TEAM NEUTRINO
Subteams

AWARDS SUBTEAM

Beyond our competition robot, our Impact Award team is hard a work writing our essay submission (News-trino) and training underclassmen to give our awards presentation at regionals. The graphics team worked closely with the awards team to craft a complimentary video submission that highlighted our theme of inspiration.



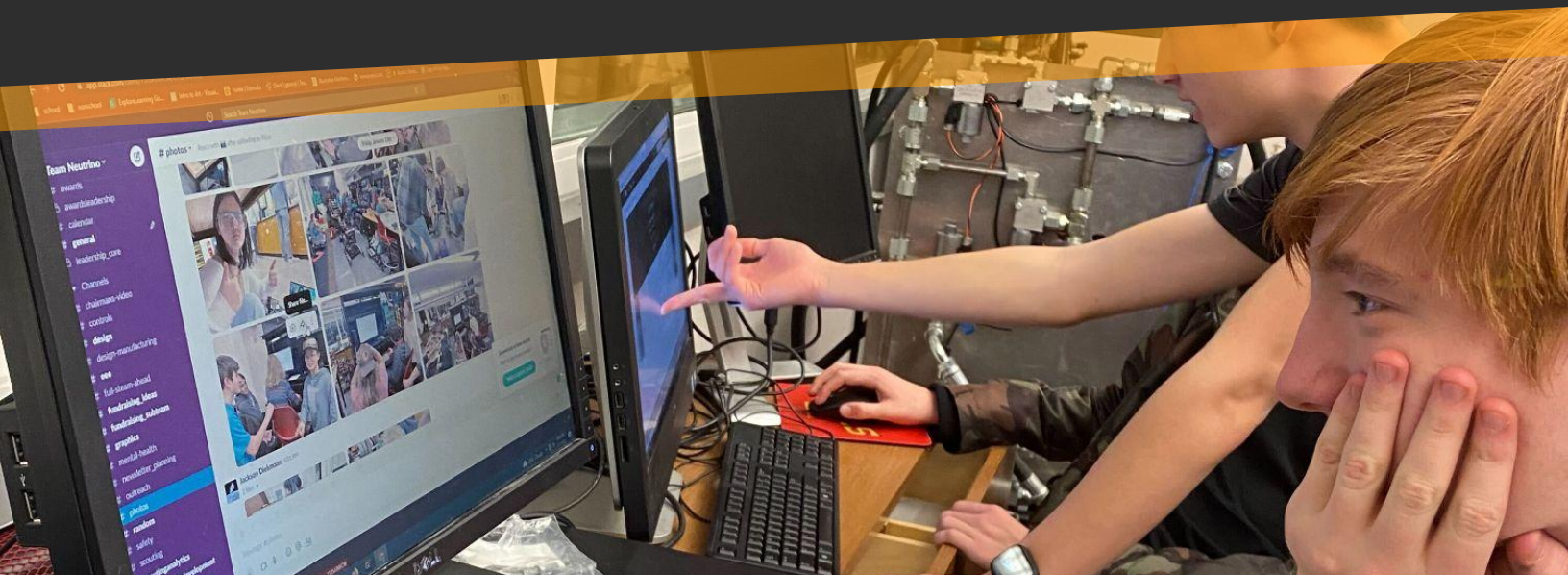
relationships. At the outreach camp, members planned activities for Enrich, Empower, Excel (EEE), an annual summer education program run by the Ames Community School District with which we've been involved since 2012. In 2022, we taught five weeks of STEM-themed activities to 67 students from first to sixth grade. Young students engaged in activities designed to develop their problem-solving skills and cultivate their interest in STEM. Each week had a theme with corresponding activities ranging from a week on motion with ping-pong parachutes to a space week with air compressor rockets. Through our consistency, we've displayed dedication to positively impact our community. 3928 has applied for and received $900 from United Way in the past two years to help us continue providing for and expanding this program.

Through our FLL mentoring programs, Team Neutrino enables local students to grow as individuals, equipping them with effective problem-solving, communication, and teamwork skills. We've mentored 29 FLL teams in the last three years. This program has allowed us to reach a total of 217 kids across 5 different schools, creating meaningful connections with FLL'ers. These connections inspire students to be

TEAM NEUTRINO
Subteams

GRAPHICS SUBTEAM

The graphics subteam was responsible for all of our Rapid React season printer materials (like this beautiful binder), newsletters, video productions, and social media initiatives. They uphold our image through apparel and logo usage.



TEAM NEUTRINO
Subteams

WEBSITE SUBTEAM

www.teamneutrino.org, the primary interface between our team and our community, is maintained by our exceptional website team. They keep the site current throughout the build season, manage press releases and online engagement, and maintain our archive of build season newsletters.

TEAM NEUTRINO
Subteams

FUNDRAISING SUBTEAM

Due to the pandemic, out fundraising team lost a significant portion of our local supporters. To supplement this loss of income, Neutrino fortified a full-team culture of fundraising to generate new ideas and connections. Fundraising made short work of these new connections, blowing past our fundraising goal and establishing strong new relationships with local (in addition to a successful fundraiser pictured above).

TEAM NEUTRINO
Subteams

OUTREACH SUBTEAM

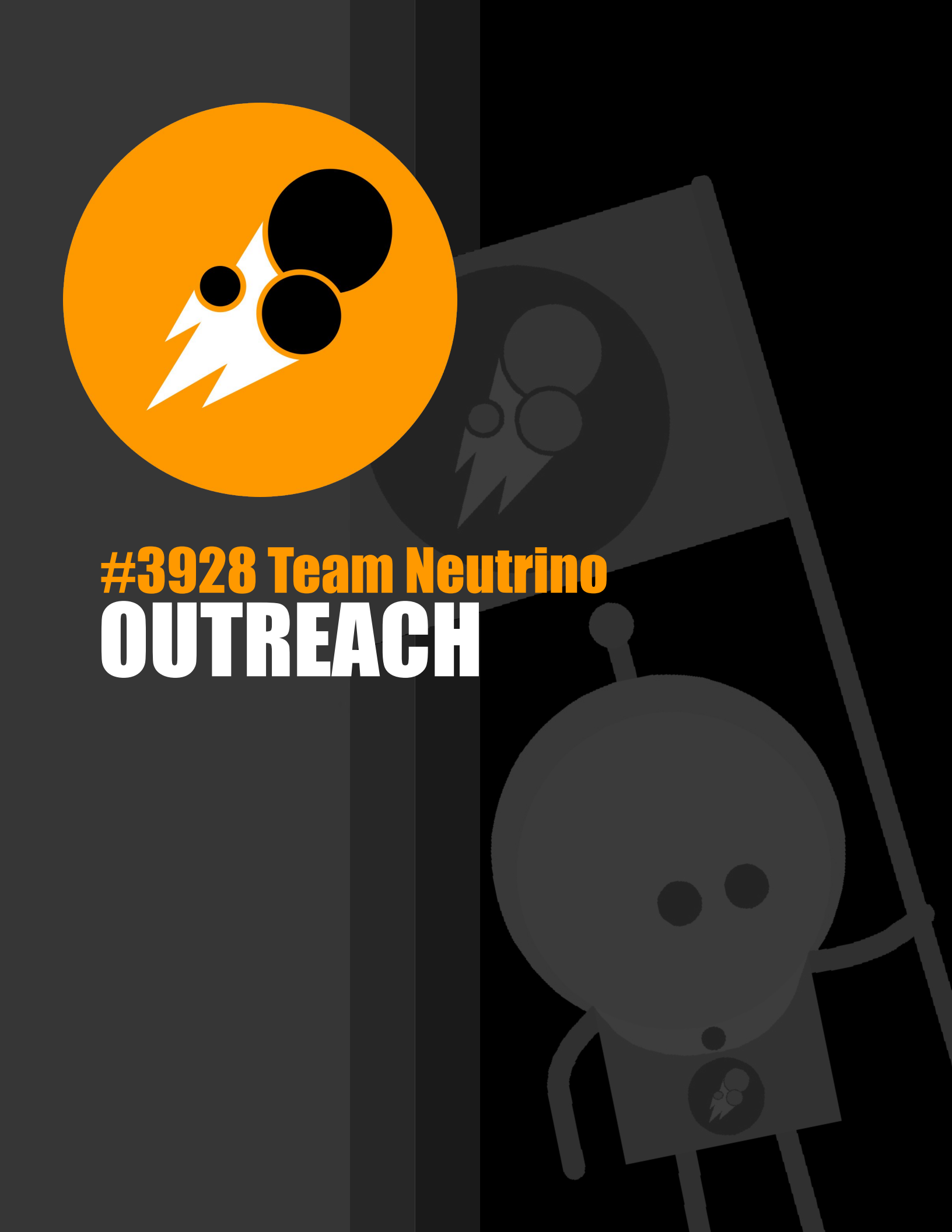
Team Neutrino takes pride in its plethora of outreach events in the Story Country community (many of which are detailed later in this binder). The team behind them is constantly at work all year long establishing new connections where Neutrinos can create new events or volunteer for existing initiatives.

TEAM NEUTRINO
Robot Reveal

2023 ROBOT REVEAL

To end the 2023 build season, Neutrino hosted our annual “robot reveal” event, where Neutrino family, friends, and the community attended a demonstration of our Rapid React logo. For the first time the public got a view of our robot, our game strategy, and a walkthrough of all the subteam work that went into making it possible. This event always motivates Neutrino and the community alike!

#3928 Team Neutrino
NEWSLETTERS



#3928 Team Neutrino
OUTREACH

TEAM NEUTRINO

CelebrAsian

MAY 2022

172 PEOPLE REACHED

CELEBRASIAN

During CelebrAsian, an event organized by the Iowa Asian Alliance, the team showcased the robot and interacted with a diverse group of individuals. Our debut, was a great success and we were able to gather valuable feedback and insights from the attendees, which will help us improve the robot's capabilities and functionality in the future.

TEAM NEUTRINO

Golden K Kiwanis Club

JUNE 2022

45 PEOPLE REACHED

GOLDEN K KIWANIS CLUB

We presented ourselves and showcased our robot in front of Kiwanis club members at Saint Paul Lutheran Church. After the demo, the Kiwanis asked excellent questions related to the design process and the team. We had to reach out to the community by engaging with the Kiwanis as well as continuing a good relationship with them. We estimate about 45 Kiwanians were in attendance for our presentation.

TEAM NEUTRINO

Enrich, Empower, Excel

JUNE-JULY 2022

67 PEOPLE REACHED

ENRICH, EMPOWER, EXCEL SUMMER CAMP

Enrich, Empower, and Excel (EEE) is a summer program open to any Ames Community School District student. The EEE summer camp offers a variety of classes intended to keep students in the world of STEM in the summer. As mentors for some of these summer camps, Team Neutrino sought to inspire and motivate students to explore and pursue STEM fields by sharing their knowledge and passion for science, technology, engineering, and mathematics.

TEAM NEUTRINO
4th of July Parade

JULY 2022

8,000+ PEOPLE REACHED

CITY OF AMES 4TH OF JULY PARADE

Team Neutrino was proud to march in the 2022 4th of July Parade, hosted by the City of Ames, after a year in hiatus due to COVID-19 concerns. The community was thrilled to be back at the event, and Neutrino was excited to once again show off our 2020/2021 competition robot. There was a high attendance and many team members were able to talk with parents about FIRST.

TEAM NEUTRINO
SCI Camps Presentation

JULY 2022

41 PEOPLE REACHED

SCI CAMPS PRESENTATION

During the SCI Camps Presentation, Neutrinos demoed their robot along with a mini presentation of 3D printing on the robot. The camp included a presentation to 5 - 8th graders who were learning about 3D printing. It was a great way to connect with our community and spread the word of FIRST!

TEAM NEUTRINO

Story Country Fair

JULY 2022

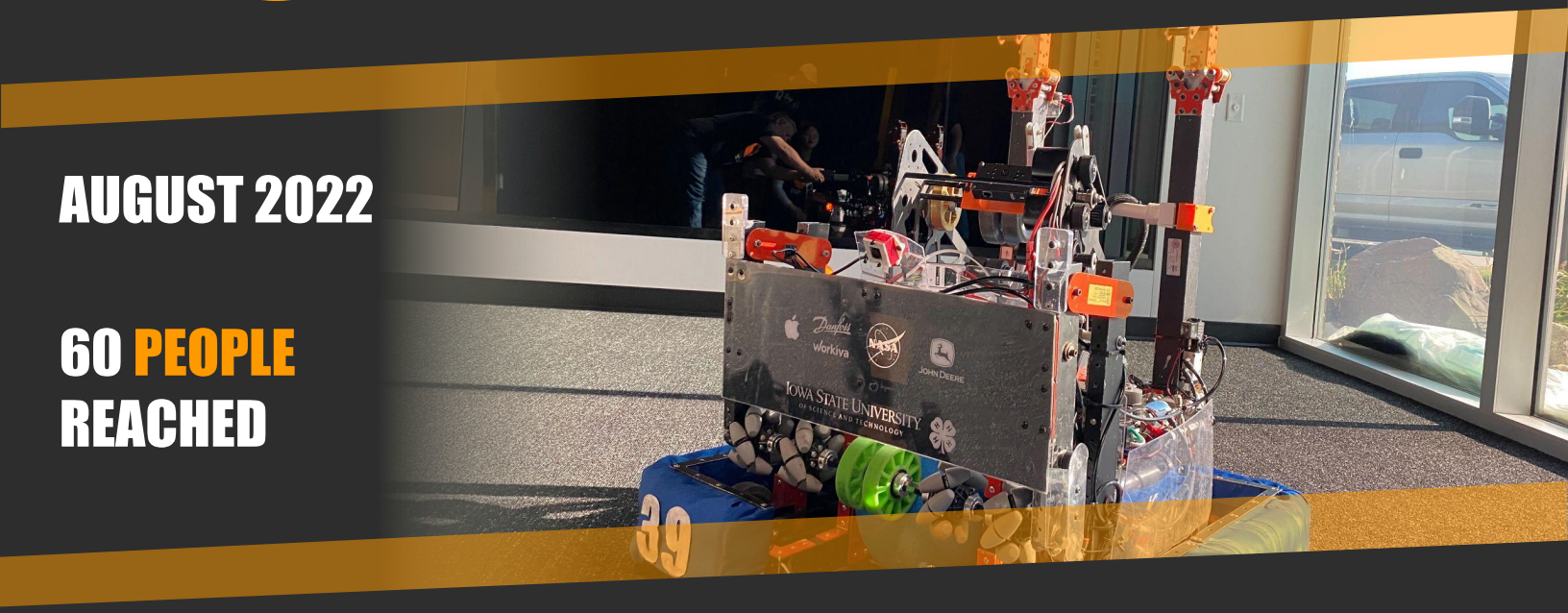
20 PEOPLE REACHED

STORY COUNTY FAIR

Our team volunteered to supervise an exhibit hall at our county's fair. While supervising members were able to share about Team Neutrino, FRC, and other FIRST programs. This was a great way to spread the word about our team and FIRST to members of our community.

TEAM NEUTRINO

Bayer Open House



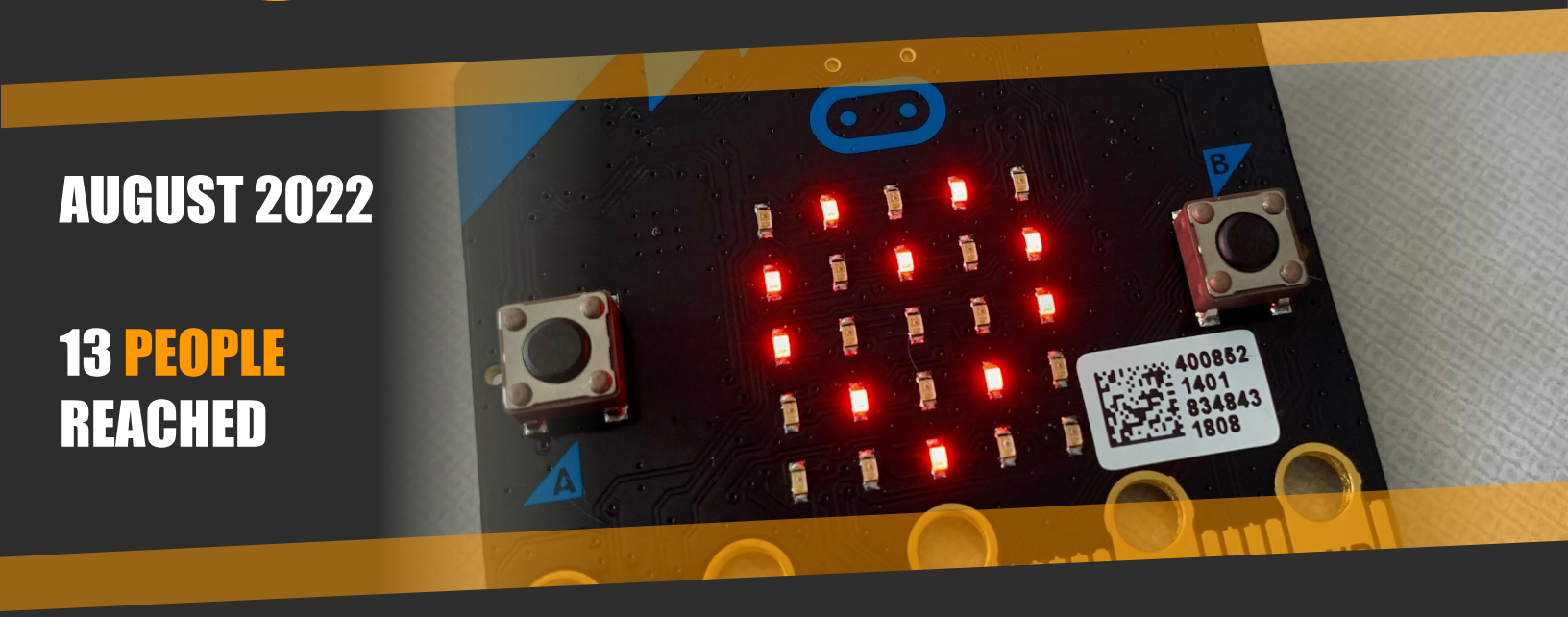
AUGUST 2022

60 PEOPLE REACHED

BAYER OPEN HOUSE

Bayer invited our team to have a booth at their open house event. Lots of parents and kids interacted with our team and robot. Some of the parents took business cards and expressed interest in FIRST programs. This was a great way to interact with lots of community members and get parents and kids interested in STEM and FIRST.

TEAM NEUTRINO
Technology Tuesday



AUGUST 2022

13 PEOPLE REACHED

TECHNOLOGY TUESDAY

Story County 4-H organized a series of workshops at the Ames Public Library. We collaborated with ISU's HABET team to develop the curriculum and secure Micro:bits prior to the event. Neutrino had the important task of running the event, and our team members had a lot of fun doing it. This event got lots of young students involved and interested in STEM.

TEAM NEUTRINO

STEM Day at Iowa State Fair

AUGUST 2022

1,000 PEOPLE REACHED

STEM DAY AT IOWA STATE FAIR

On STEM day at the Iowa State Fair, Team Neutrino: put up a booth in the 4-H building, volunteered for Blue Origin's outreach table with the Governor's STEM Council, and demonstrated the robot with other FRC teams. Neutrino's taught kids about STEM and told parents about all of the FIRST programs.

TEAM NEUTRINO

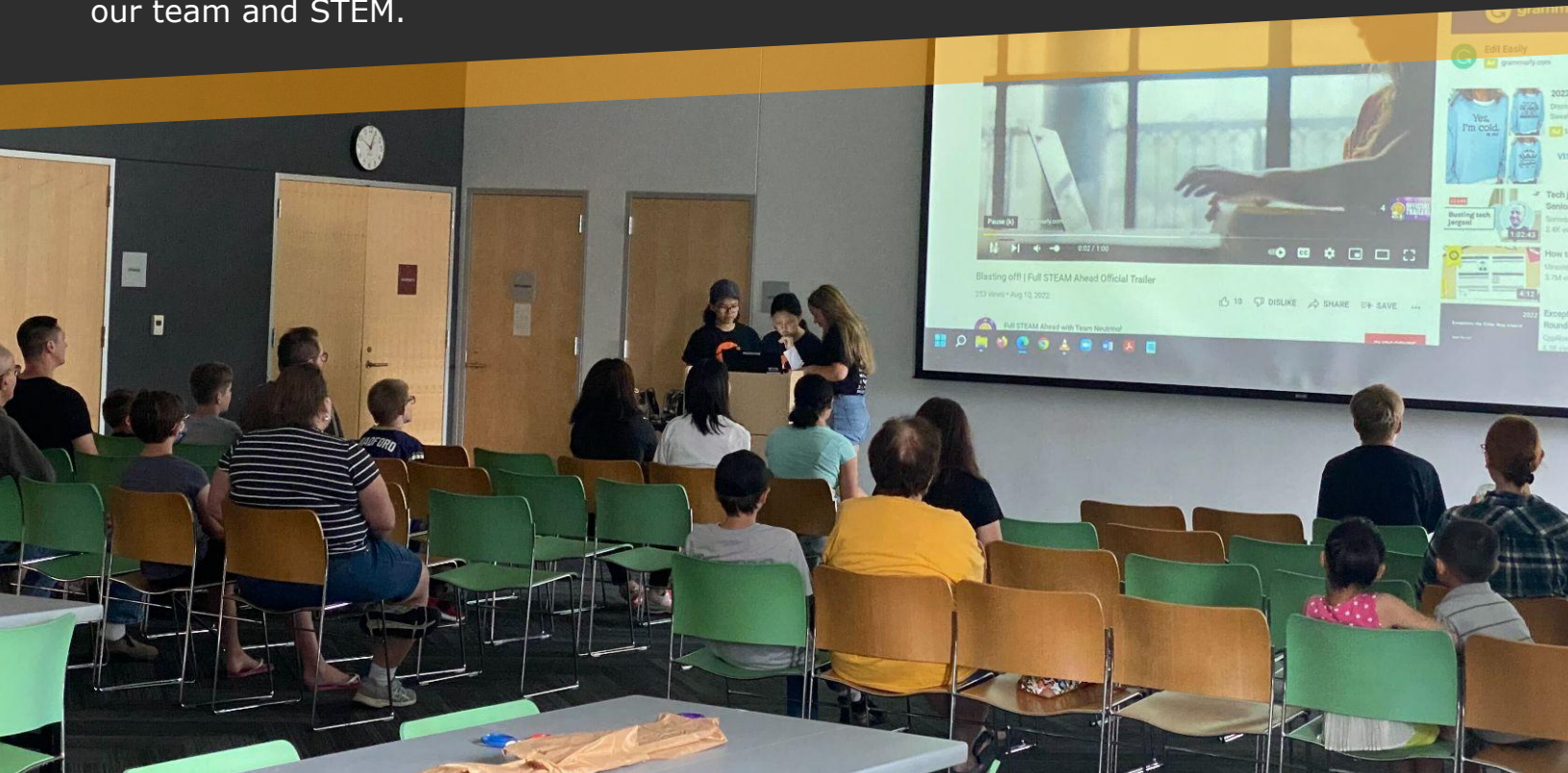
Full STEAM Ahead Premiere

AUGUST 2022

32 PEOPLE REACHED

"FULL STEAM AHEAD" PREMIERE

Team Neutrino worked hard to create our very own TV show, to celebrate this accomplishment we held a premiere event at the Ames Public Library. In addition to showing the first episode, Neutrino members helped kids complete the activity in the episode. Parents and kids enjoyed the show and activity and many showed interest in our team and STEM.



TEAM NEUTRINO

AMS FLL Training

AUGUST 2022

44 PEOPLE REACHED

AMS FLL TRAINING

Team Neutrino members volunteered to help teach middle school FLL members how to program the LEGO SPIKE Prime robots. They also volunteered as judges for the tryouts and helped younger kids discover their hobbies with problem solving and creative thinking.

TEAM NEUTRINO

Des Moines Mini Maker Faire

SEP 2022

700 PEOPLE REACHED

SCIENCE CENTER MINI MAKER FAIRE

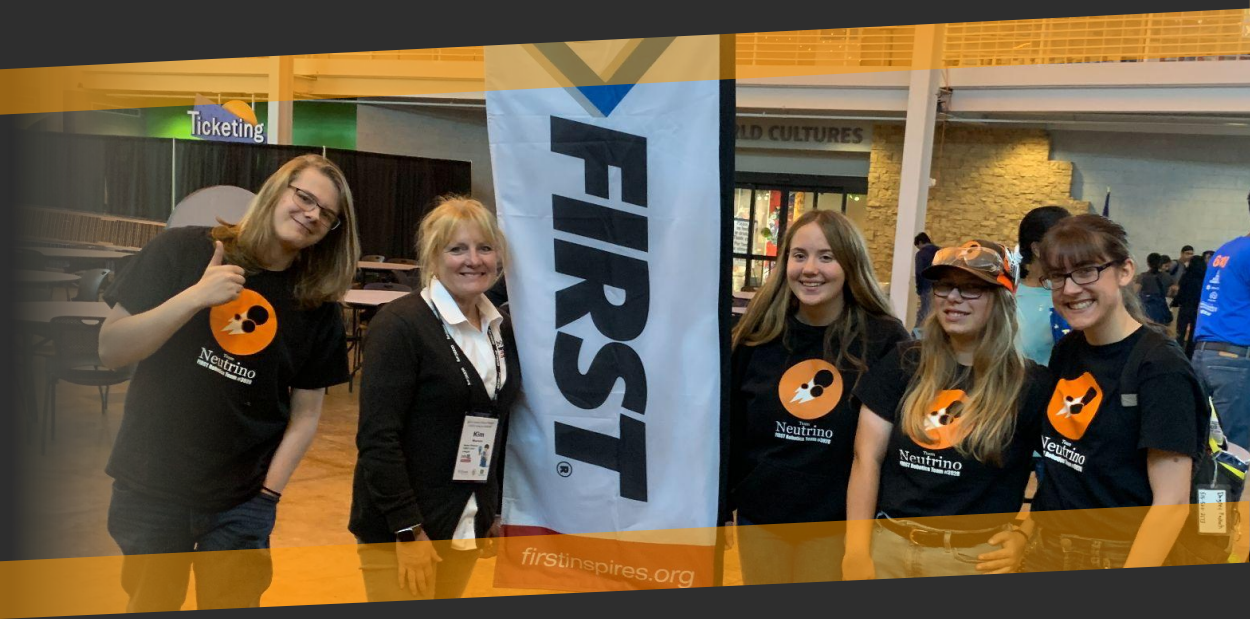
At the Science Center of Iowa's Mini Maker Faire, Neutrinos returned for another year of running STEM activity stations for guests and demonstrating our current competition robot. Local kids were fascinated by the program, and our students handed out many handouts with FLL information for this season.

TEAM NEUTRINO

Quad Cities FLL Kickoff

September 2022

130 PEOPLE REACHED



QUAD CITIES FLL KICKOFF

Our team were invited by Pat Barnes to present at the Quad Cities FLL Kickoff event. Neutrino members gave 2 half hour lectures focused mainly on robot strategy. They also answered many audience questions during the lectures and at an alumni panel.

TEAM NEUTRINO

United Way Trunk or Treat

October 2022

100 PEOPLE REACHED

UNITED WAY TRUNK OR TREAT

Our team volunteered at the Ames North Grand Mall Trunk or Treat event. Neutrino members made and gave out paper airplane kits and helped kids assemble them. This event was a great way to reach lots of people and get kids excited about STEM.

TEAM NEUTRINO

Ames FTC League Meet

November 2022

400 PEOPLE REACHED

AMES FTC LEAGUE MEET

Team Neutrino was able to volunteer at a local FTC event. Neutrino members had a variety of jobs that helped keep the event running smoothly. Our team was able to interact with younger members of FIRST and get them interested in FRC and Team Neutrino.

TEAM NEUTRINO
ITEC Conference

November 2022

10 PEOPLE REACHED

ITEC CONFERENCE

Our team was able to present at the ITEC Conference which invites teachers from all around Iowa to learn about technology and education. Our outreach team prepared a presentation about our team and FIRST programs. Members were able to answer lots of questions from teachers. Many of the teachers showed interest in FIRST programs.

TEAM NEUTRINO
Boy Scouts Presentation

November 2022

30 PEOPLE REACHED

BOY SCOUTS PRESENTATION

Team Neutrino volunteered to help a local Cub Scouts Den complete their robotics merit badge. Neutrino members demonstrated our robot and answered lots of questions from the scouts. A lot of the scouts and parents showed further interest in FIRST programs and STEM in general.

TEAM NEUTRINO

Ames FLL Scrimmage

November 2022

250 PEOPLE REACHED

AMES FLL SCRIMMAGE

Our team ran a practice FLL event for Ames Middle School teams. Team members volunteered as referees for the robot game and judges for the project talks. After the project talks and robot runs were done the team gave a presentation about FRC and Team Neutrino. This was a great way to get many students interested in our team.

TEAM NEUTRINO

Webster City FLL Regional

December 2022

300 PEOPLE REACHED

WEBSTER CITY FLL REGIONAL

Members mentored teams while they competed at the regional competition. They also ran the competition clock, soundboard, and live video streams of judging and managed the music.

TEAM NEUTRINO

Ames FTC League Meet

December 2022

400 PEOPLE REACHED

AMES FTC LEAGUE MEET

Team Neutrino was able to volunteer at another local FTC event. Neutrino members had a variety of jobs that helped keep the event running smoothly. Our team was able to further interact with the FTC teams and get them interested in FRC and Team Neutrino.

TEAM NEUTRINO

Johnston FLL Regional

December 2022

470 PEOPLE REACHED

JOHNSTON FLL REGIONAL

Team Neutrino members volunteered at this regional FLL competition. Most of the members were referees and field assistants. The volunteers were able to talk to FLL team members and coaches to get them interested in the higher levels of FIRST.

#3928 Team Neutrino
MENTORING

TEAM NEUTRINO
Mentored Teams

EDWARDS FLL EXPLORE

This season, Team Neutrino helped an Edwards FLL explore team by assisting in their exposition. We mentored 1 FLL Explore team, and they worked on making a robot with beginner level programming, using Lego SPIKE. They also made a poster to present their overall learning and progress at the end of the year.

TEAM NEUTRINO
Mentored Teams

AMES MIDDLE SCHOOL FLL CHALLENGE

Ames Middle School, through our mentor of student mentors, mentored 4 Challenge teams totaling 40 students. This season, we had State qualifying teams and 1 Champion's Award winner. These teams serve as our most powerful source of exposure to high school *FIRST* at the middle school.

TEAM NEUTRINO
Mentored Teams

FELLOWS FLL EXPLORE & CHALLENGE

At local Fellows Elementary, Team Neutrino members taught 1 Challenge team (above and below) and 3 Explore teams (not pictured). Members mentored Explore students and taught them how to engage with basic LEGO models, teaching the basics of energy and project research. Mentors identified this program as exceptionally energetic!

TEAM NEUTRINO
Mentored Teams

CORN HORNS FLL CHALLENGE

A Neutrino team member, Owen McCormick, helped mentor his younger brother's FLL team! He taught them about presentation and robot building skills that he learned through being on FLL. Owen made a lasting impact on these children that will stay with each of them throughout their entire lives.

#3928 Team Neutrino
SPONSOR VISITS

TEAM NEUTRINO

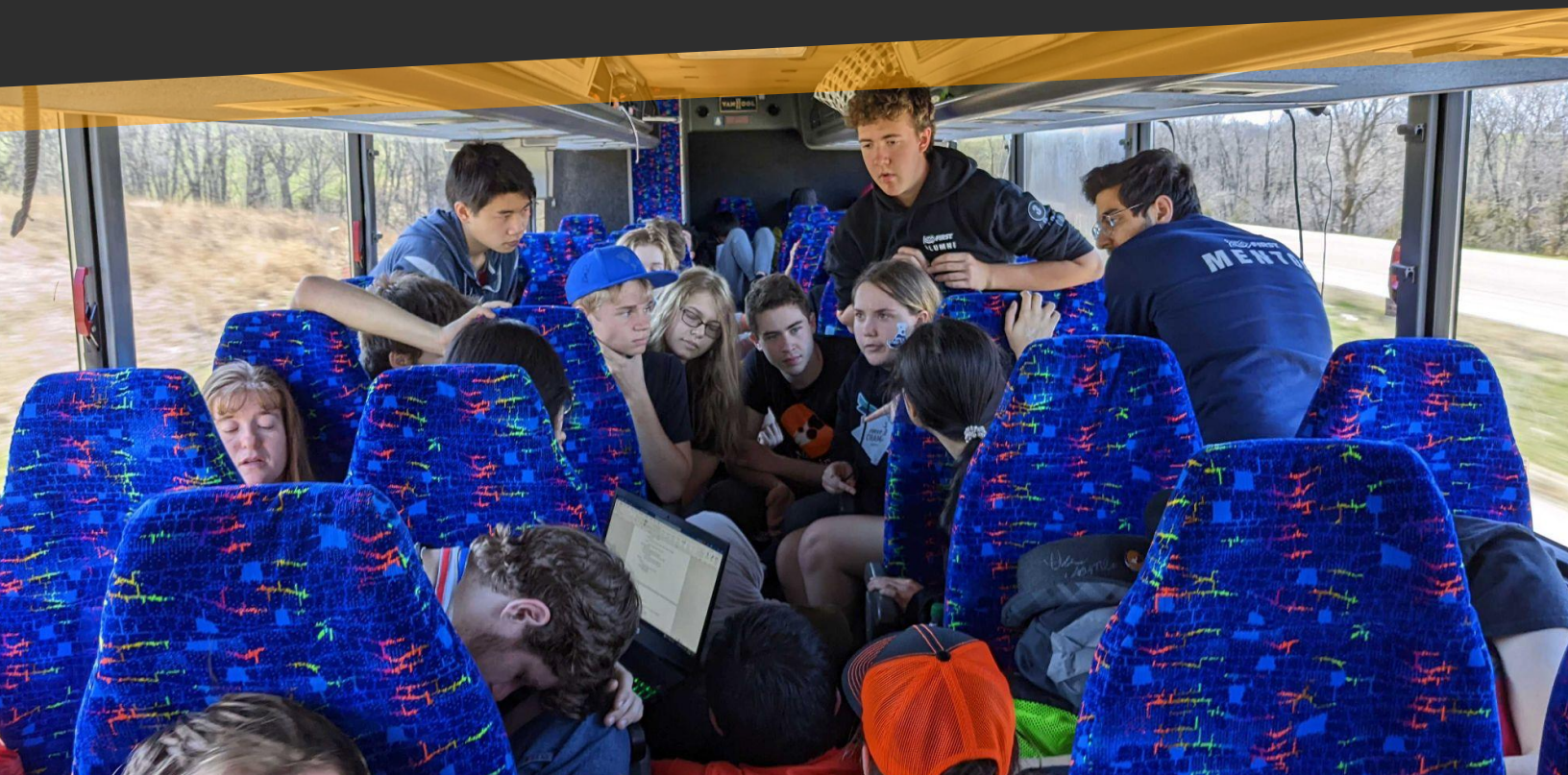
CIT Sponsor Visit

APRIL 2022

1 PERSON REACHED

CIT SPONSOR VISIT

Our team visited a long-time sponsor, CIT Transportation, and presented to the owner, Kim Gryzwacz. She gave us valuable feedback on how to improve our presentations for future sponsor visits. This visit also played a part in renewing our CIT sponsorship.



TEAM NEUTRINO

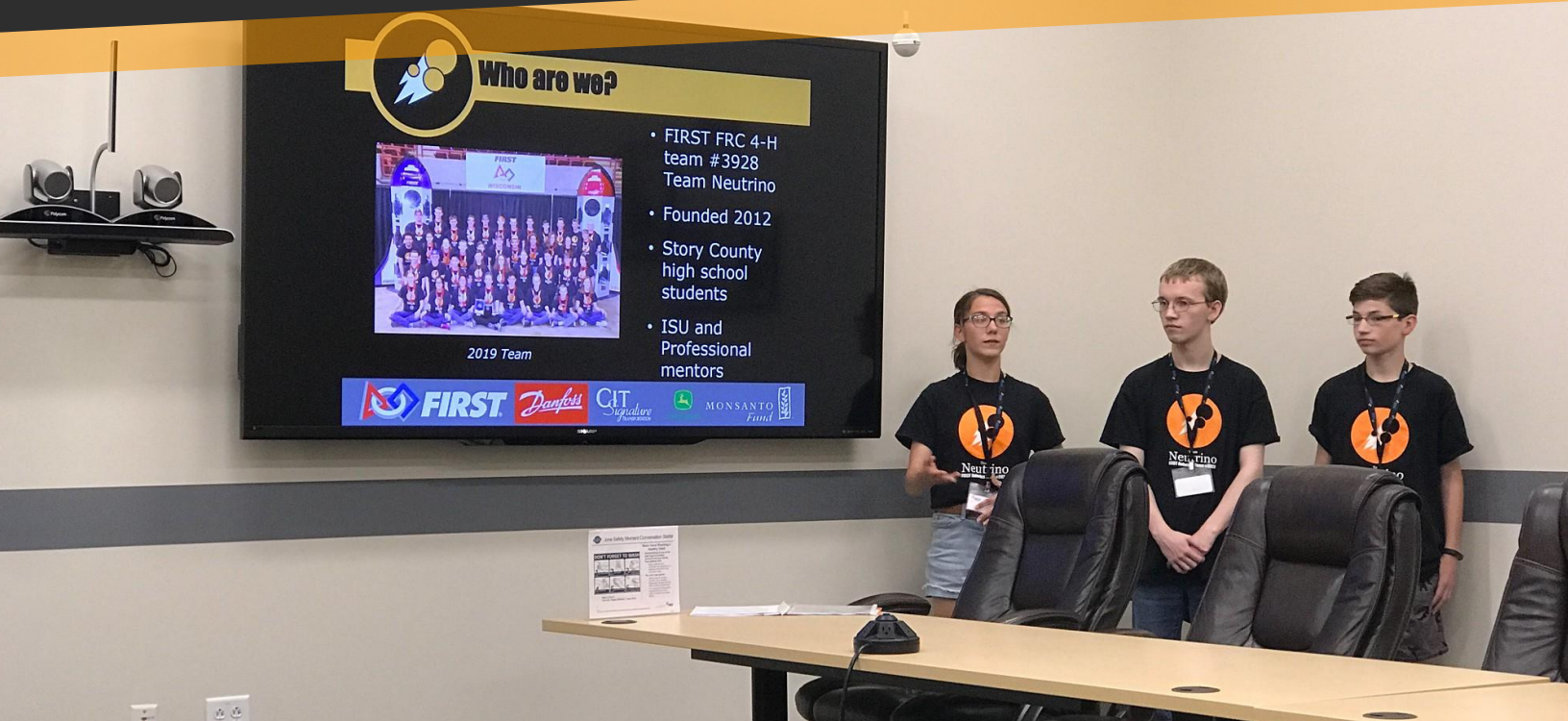
REG Sponsor Visit

JULY 2022

9 PEOPLE REACHED

REG SPONSOR VISIT

Neutrino visited one of our sponsors to present about our past season and our team accomplishments. We also demonstrated our robot to the employees in person and on zoom. This visit was a great refresher to a recurring sponsor and the team was able to renew this partnership.



TEAM NEUTRINO
Frontline Sponsor Visit

JULY 2022

20 PEOPLE REACHED

FRONTLINE SPONSOR VISIT

Our team visited one of our newer sponsors, Frontline BioEnergy. We were able to present to a large number of their employees and demonstrated the robot for them. This visit was a great start to our new relationship with their company.

TEAM NEUTRINO
John Deere Sponsor Visit

JULY 2022

25 PEOPLE REACHED

JOHN DEERE SPONSOR VISIT

Our team was able to present to one of our largest sponsors during their monthly "Lunch and Learn" event. Many employees attended in person and even more joined on a zoom call. After the presentation the robot was demonstrated. Many of the employees were very interested in our team and the robot. Some of the employees even showed interest in becoming mentors.

TEAM NEUTRINO

Bayer Sponsor Visit

JULY 2022

10 PEOPLE REACHED

BAYER SPONSOR VISIT

The team's first visit to Bayer was a great success. The members gave a captivating presentation about the team and its previous season, which was followed by a demonstration of their robot. The Bayer employees were highly attentive and asked numerous questions, which the team answered with ease.

TEAM NEUTRINO

Danfoss Sponsor Visit

AUGUST 2022

27 PEOPLE REACHED

DANFOSS SPONSOR VISIT

Team Neutrino was excited to visit one of our largest sponsors, Danfoss. At this visit team members presented about our accomplishments in our past season and thanked them for their continued support. Neutrino members answered lots of questions during our robot demo. After the presentation and robot demo members were given a tour of the facility.

TEAM NEUTRINO
Workiva Sponsor Visit

October 2022

30 PEOPLE REACHED

Workiva Sponsor Visit

Our team visited a long time and returning sponsor to present about our accomplishments last season and demo our robot. Neutrino members made sure to thank Workiva for their sponsorship and were able to answer lots of follow up questions.

TEAM NEUTRINO - 2023 SEASON

For more information, visit

TEAMNEUTRINO.ORG @ FRC NEUTRINO