TEAM NEUTRINO #3928

2024 Pit Binder

For more information, visit

TEAMNEUTRINO.ORG @FRCNEUTRINO

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

FIRST®

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.

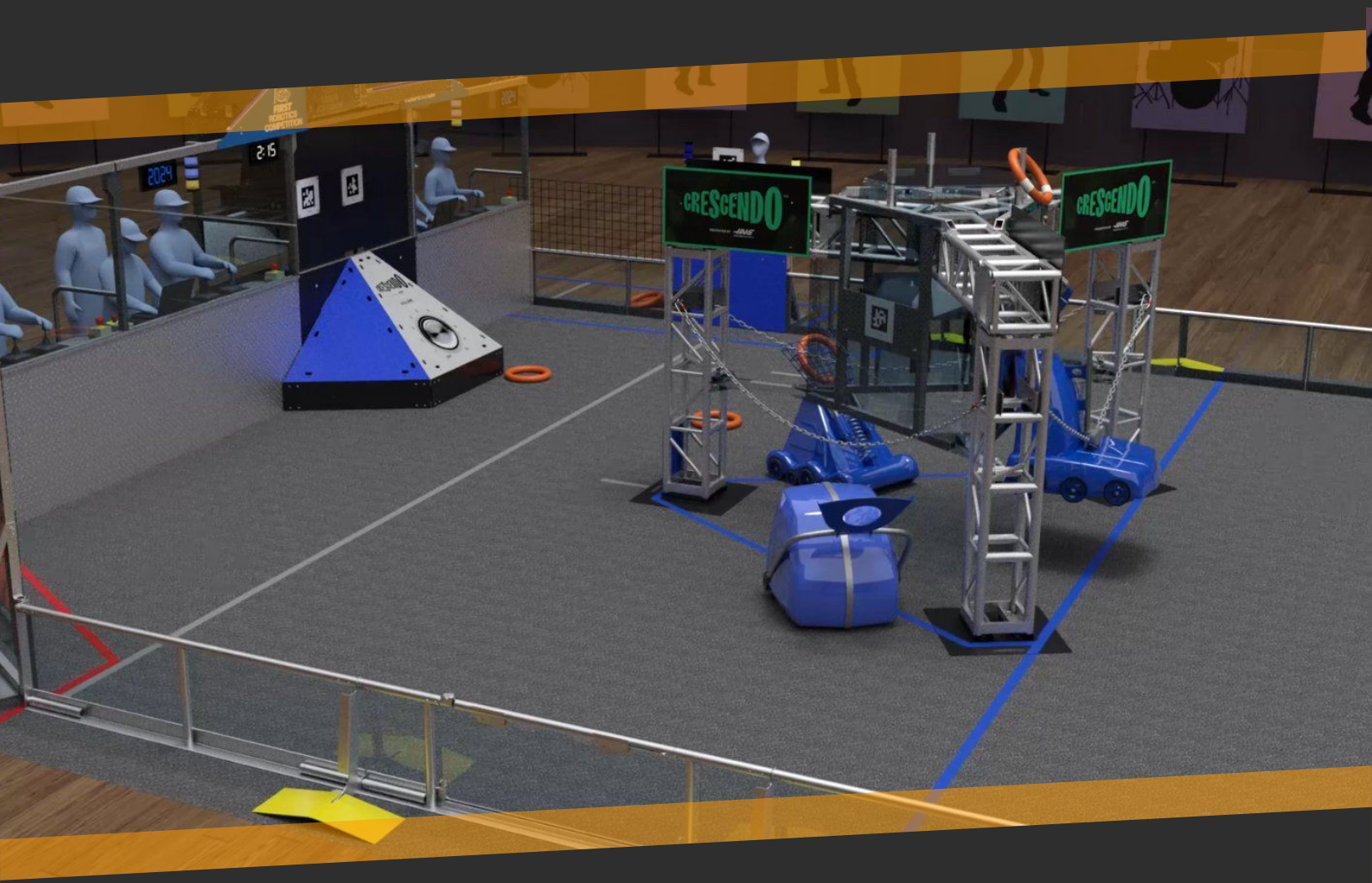
TEAM NEUTRINO
2024 Crescendo

PLAYING 2024'S CRESCENDO GAME

In CRESCENDO presented by HAAS, two alliances compete to score notes in an amp and speaker with an exciting climb at the end of each match! During that time, robots are also able to score notes in a trap, and human players can throw additional notes into the field to score more points. Throughout each match, human players interact with the match by hitting buttons to amplify the speaker or gain coopertition points.

CRESCENDO℠

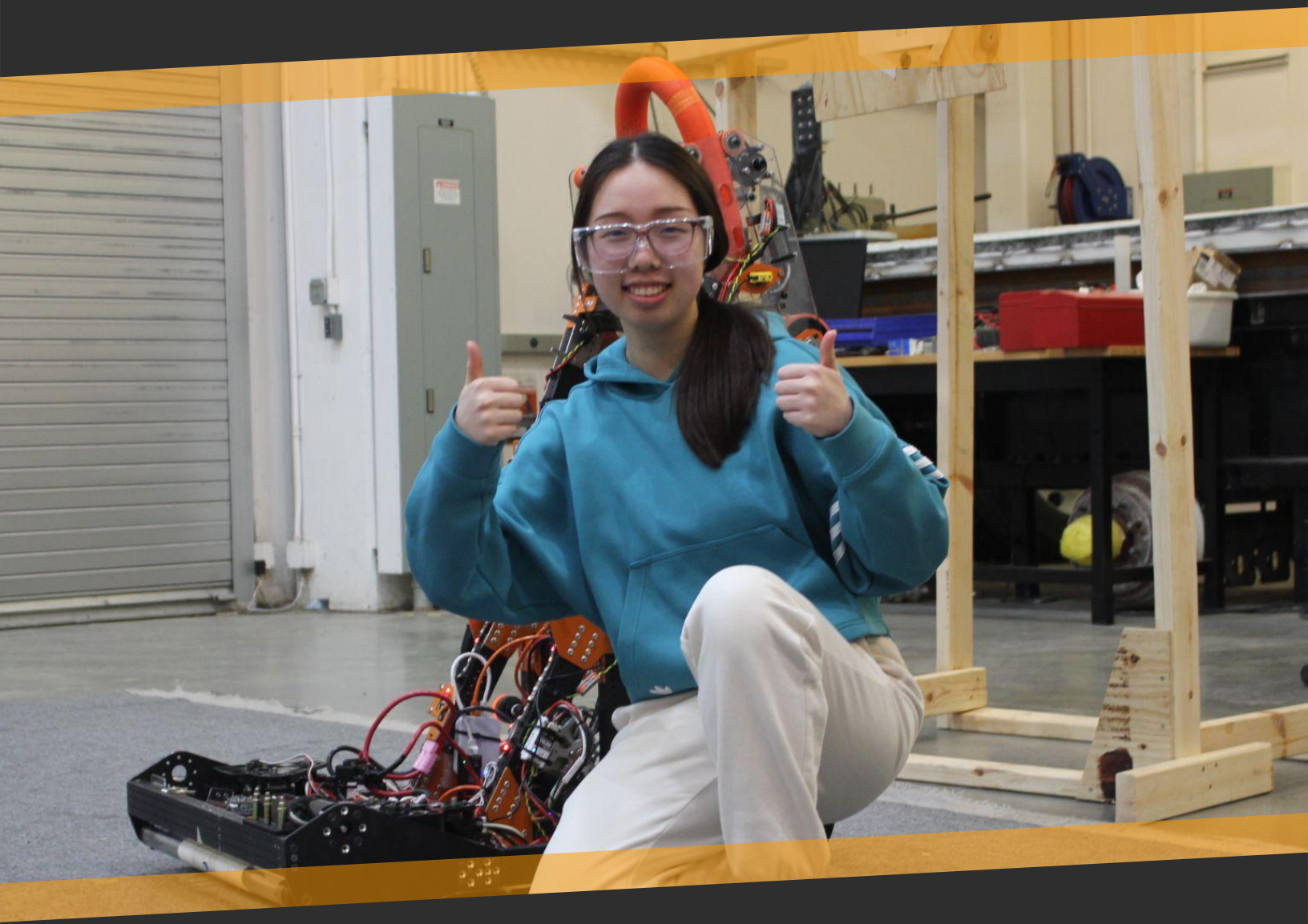
PRESENTED BY HAAS Gene Haas Foundation



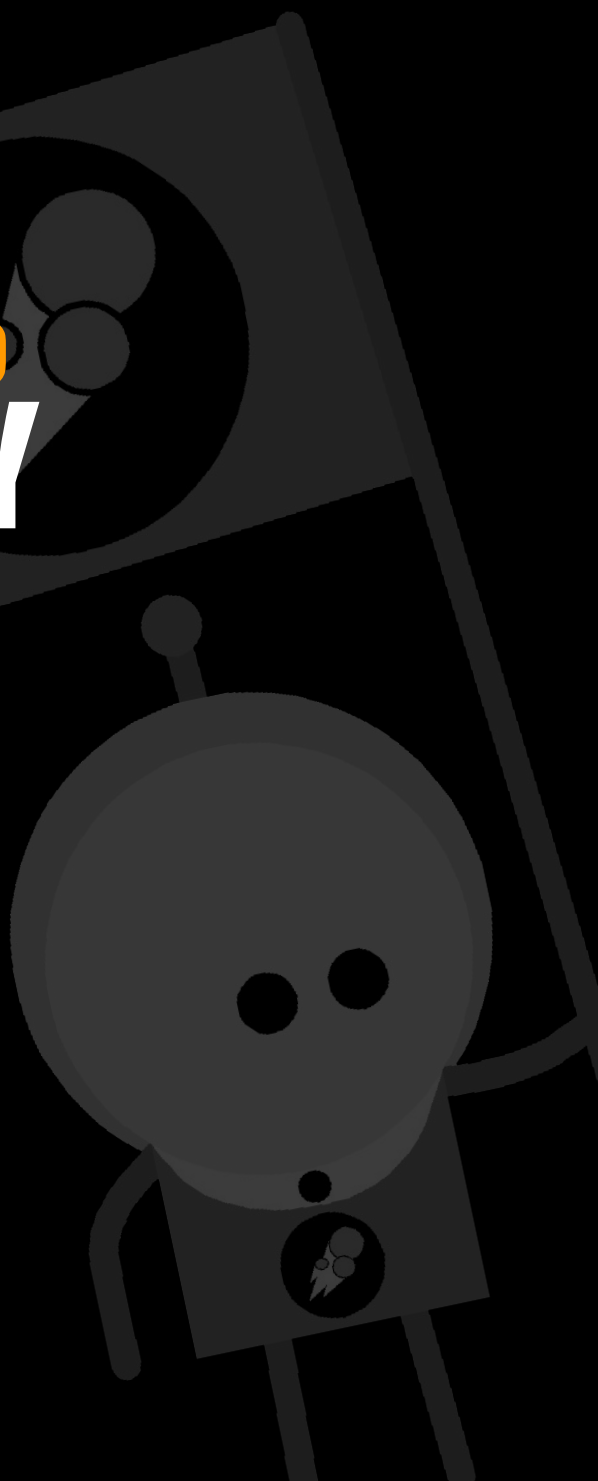
TEAM NEUTRINO
Safety Overview

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 work areas or operating machinery, and always has a well-stocked first aid kit and a 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. Now 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 FIRST.

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 ranked 9th and received the Excellence in Engineering and Finalist awards. At the North Star Regional, the team finished as #1 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 seeded 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. The team also won the Cowtown Throwdown offseason competition.

THROUGH THE YEARS

TEAM NEUTRINO
2016-2018

In 2016, Team Neutrino went to the Minnesota North Star regional and the Iowa regional The team was a semifinalist at North Star and a quarterfinalist at Iowa. The team had the honor of winning the Judge's Award at the Iowa Regional.

In 2017, Team Neutrino went to the Minnesota North Star regional and the Iowa regional. a semifinalist North Star. At Iowa, the team was a quarter finalist and team member Rucha Kelkar won the Dean's List Finalist Award. At North Star, Team Neutrino was seeded 2nd and won the Chairman's Award which allowed them to compete at the World Championship. 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. At Iowa they were the #2 seed, finalists, and recipients of the Engineering Inspiration award. This qualified the team for the World Championship in Detroit, where they were the 7th seed alliance captains and quarter finalists in the Archimedes division.

THROUGH THE YEARS

TEAM NEUTRINO
2019-2021

In 2019, Team Neutrino attended the Iowa Regional and Seven Rivers Regional. At Iowa, the team was the #3 seed, with member 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. This qualified the team for the World Championships in Detroit.

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 2021 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).

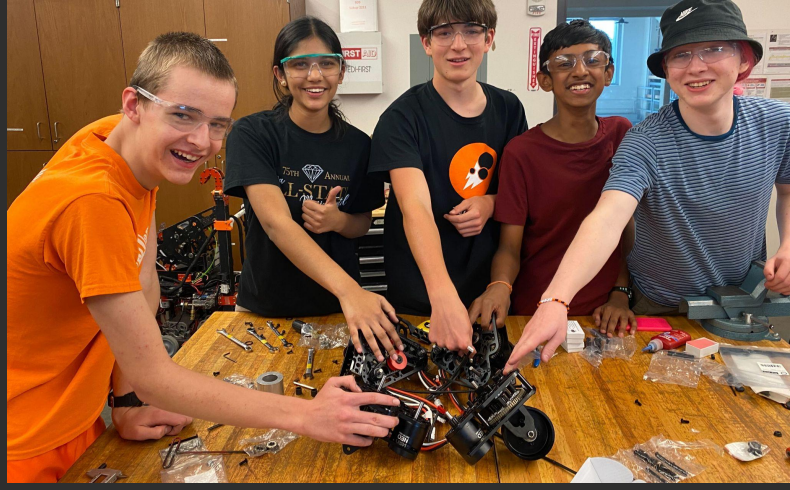
In 2023, Team Neutrino attended the Iowa Regional, Northern Lights Regional, and the Houston World Championships. At the Iowa regional, we were awarded the Engineering Inspiration award, and a member of our team, Becky Murphy, was recognized as a Dean's List Finalist. We also won the Excellence in Engineering award at the Northern Lights Regional, which allowed us to qualify for Champs in Houston.

THROUGH THE YEARS

#3928 Team Neutrino

MEET THE TEAM


Neutrino




United Way
Neutrino
39
28


Neutrino


ProNails Spa
OPEN


Neutrino
3M
3928
3928

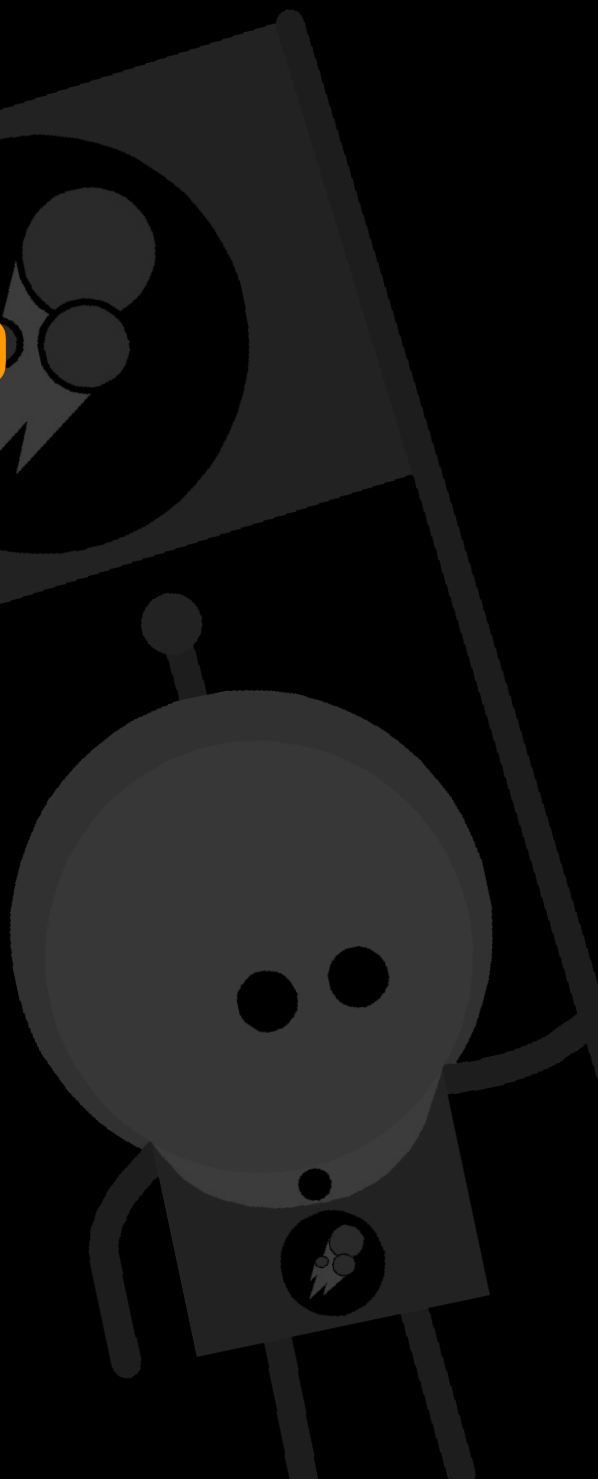

Upcoming Events
Des Moines Mini
Maker Faire


Team
Neutrino


3928
3928


Workiva
3928

#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.

2023-2024 Members

STUDENT LEADERS

Captain: Morgan Danielson **Co-Captain:** Adam Zhu

As Team Captain and Co-Captain, Morgan and Adam work together to ensure the team is working smoothly and efficiently. They institute the core values of the team, as well as make announcements, send emails, and present at team meetings. As far as individual responsibilities go, Adam oversees all non-technical aspects of the team; this includes graphics, outreach, fundraising, website, and more. Morgan oversees the technical aspects of the team, which includes design and controls.

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. Sarah is the main representative to ensure machine training and safety for all members.

Safety Captain Sarah Yao

The Design Manager oversees the CAD design, prototyping, and manufacturing of the team's robot. It is Anton'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.

Design Manager Anton Ludes-Bedell

The Manufacturing Manager oversees the manufacturing of the robot. It is Shreya'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.

Manufacturing Shreya Srinath

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

Webmaster Josh Wo

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

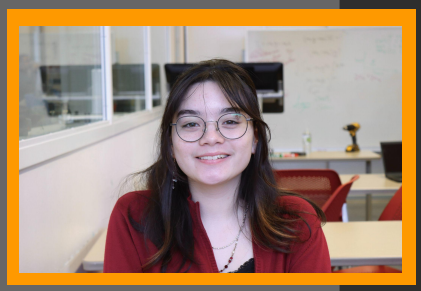
The Awards Manager is responsible for overseeing all traditional award submissions, including the Chairman's Award. In addition to maintaining comprehensive awards documentation, Logan manages award timelines and presentations, and trains underclassmen about the process.

Fundraising Manager Meabh Hennessy

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

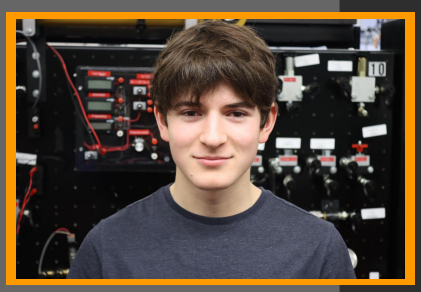
Graphics Manager Mick Wu

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. Mick oversees the production of printed materials, video content, and social media publications.



Outreach Manager Grace Compton

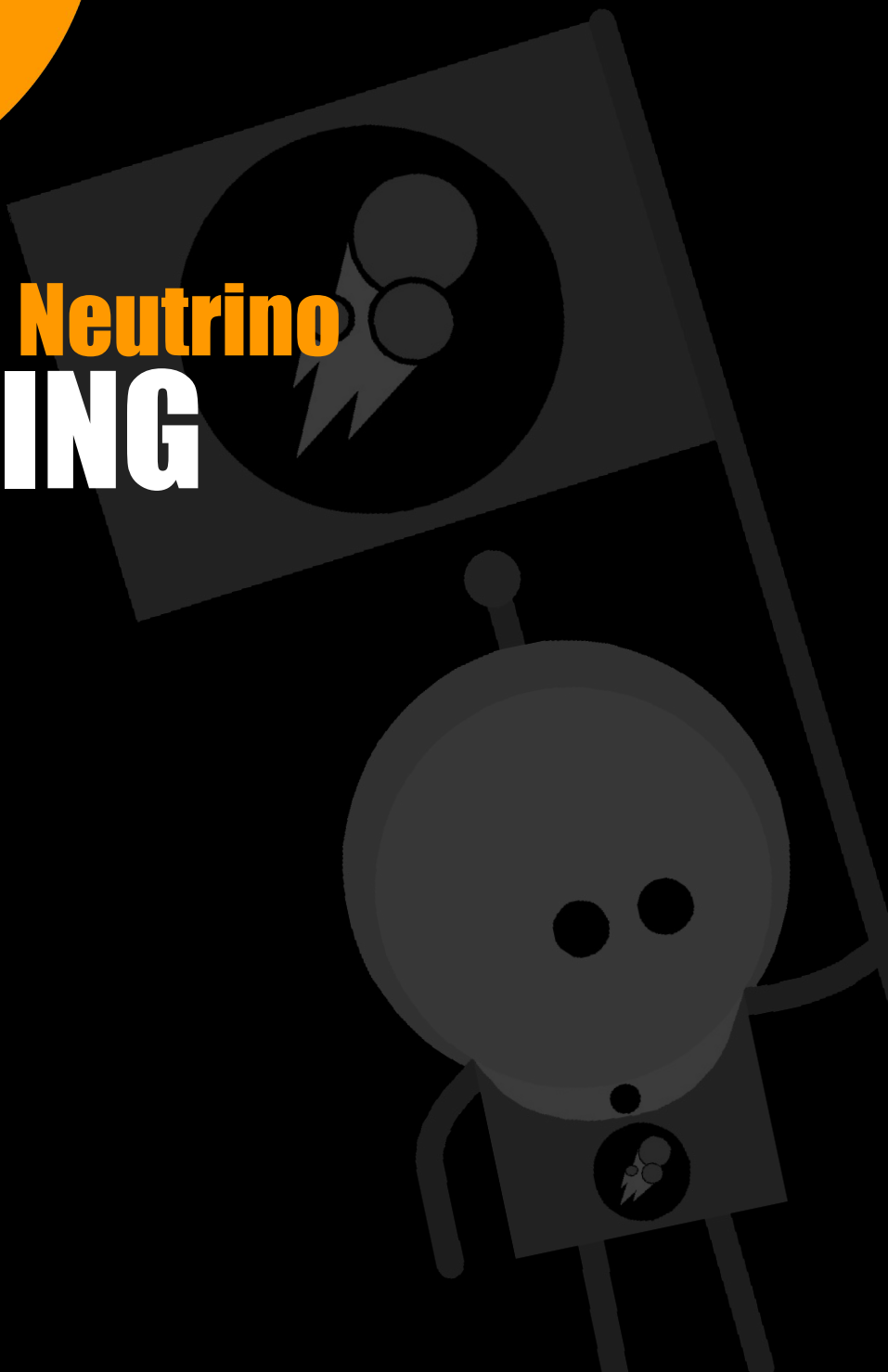
The Outreach Manager is in charge of organization and documentation of all outreach events, and acts as an ambassador for new community events and connections. Grace maintains local relationships and establishes new community outreach opportunities for the team.



Scouting Manager Matthias Roettger

The couting manager is in charge of the programming of the Scouting App. Matthias is responsible for leading the design of the website and the spreadsheet. He is also supposed to report progress to the team Captain progress throughout the season.

#3928 Team Neutrino
MARKETING

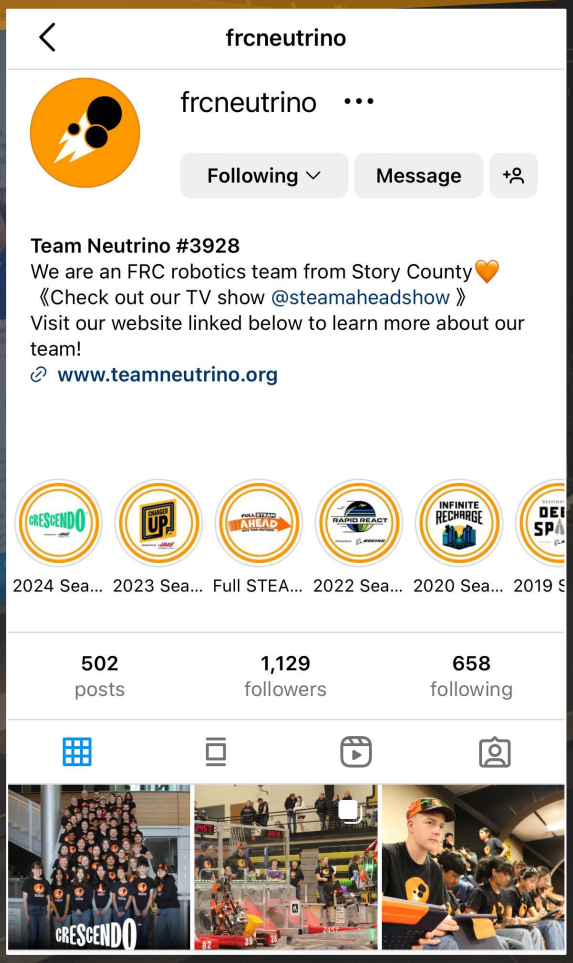


TEAM NEUTRINO
Team Branding

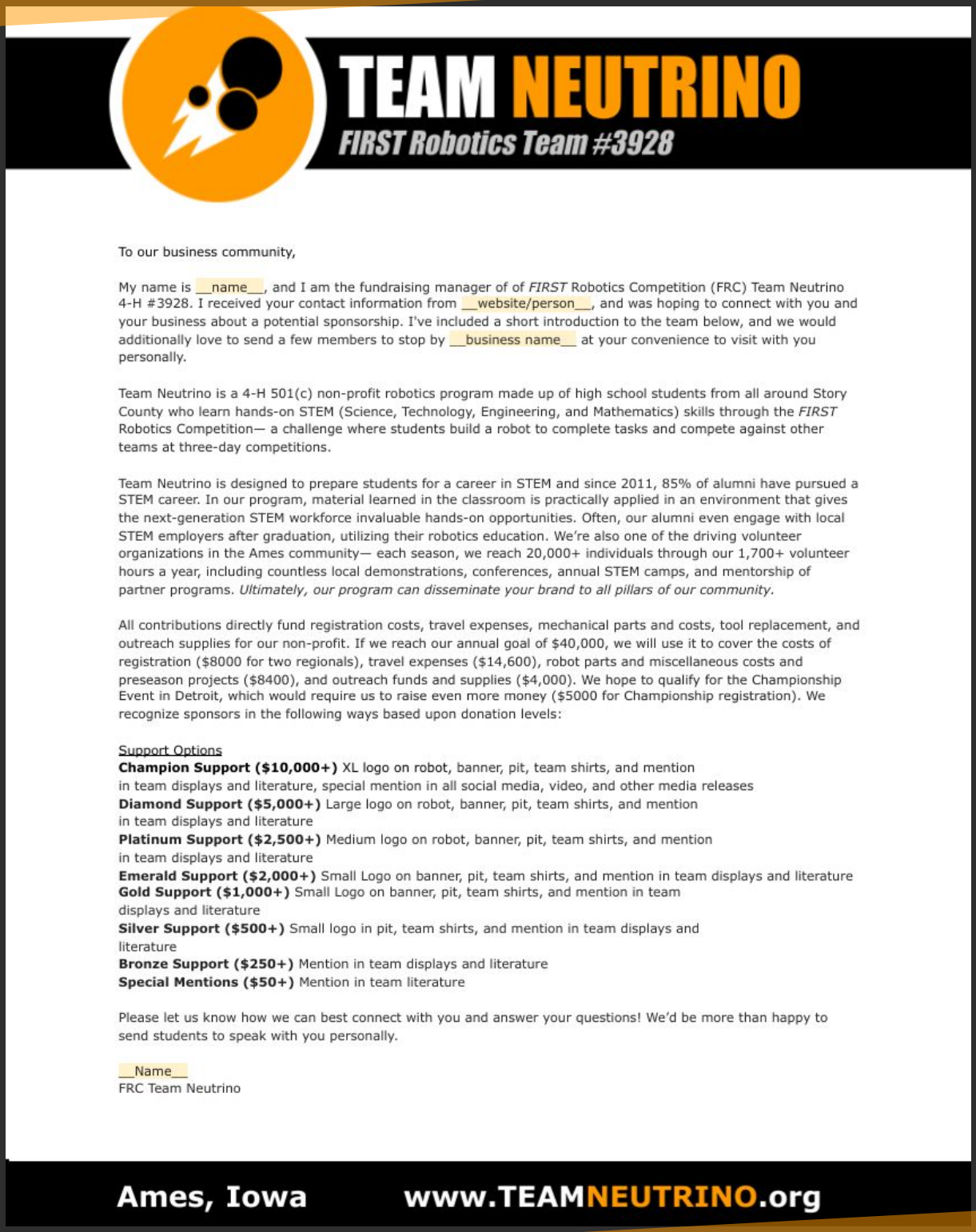
BRANDING THROUGH SOCIAL MEDIA

As an extension of our apparel and in-person branding (including printed materials, such as this binder), Neutrino utilizes official Instagram, 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!



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

Find us on social media
@frcneutrino

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
FIRST Robotics Team #3928

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).

CHARGED UP

PRESENTED BY HAAS

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!

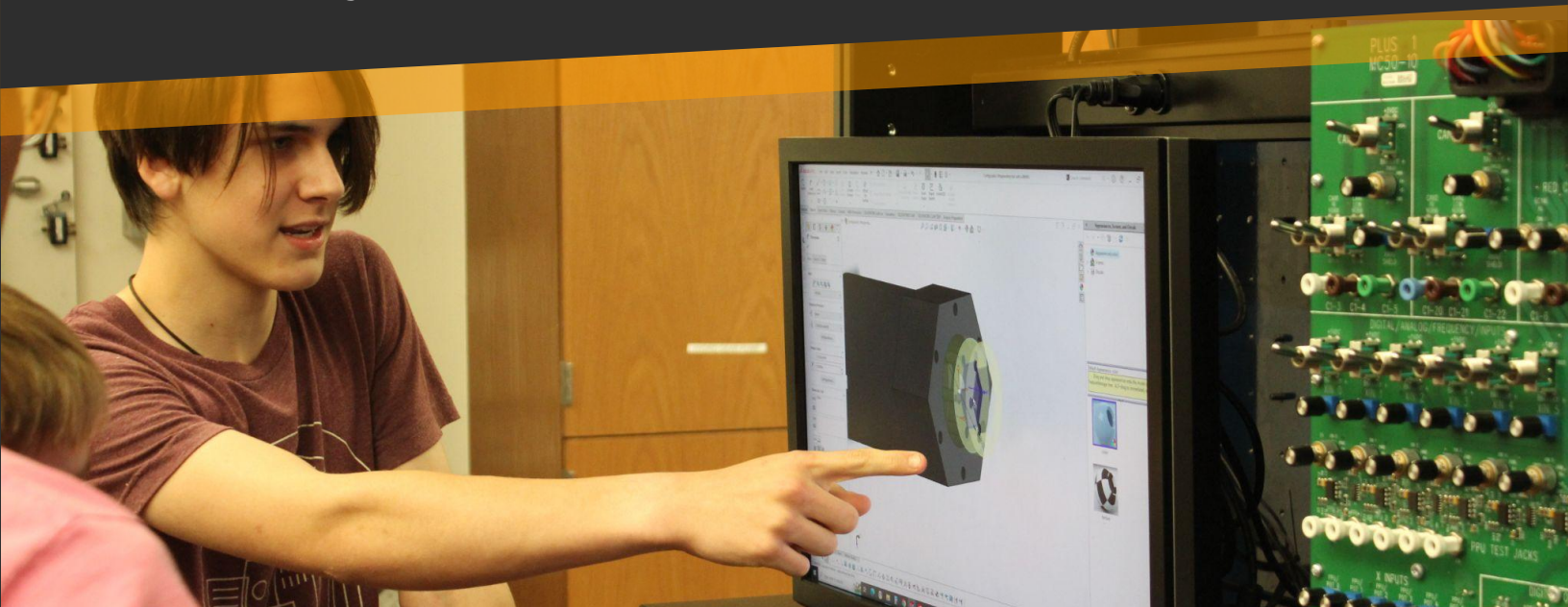
This brochure was developed as a way to educate the community about our team, FIRST Robotics, and the Mission of FIRST. It details out accomplishments of the now-completed season.

#3928 Team Neutrino
PRE-SEASON 2024

TEAM NEUTRINO
Training Camps

LEARNING NEW STEM SKILLS

This past summer, Team 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 19, 21, 23

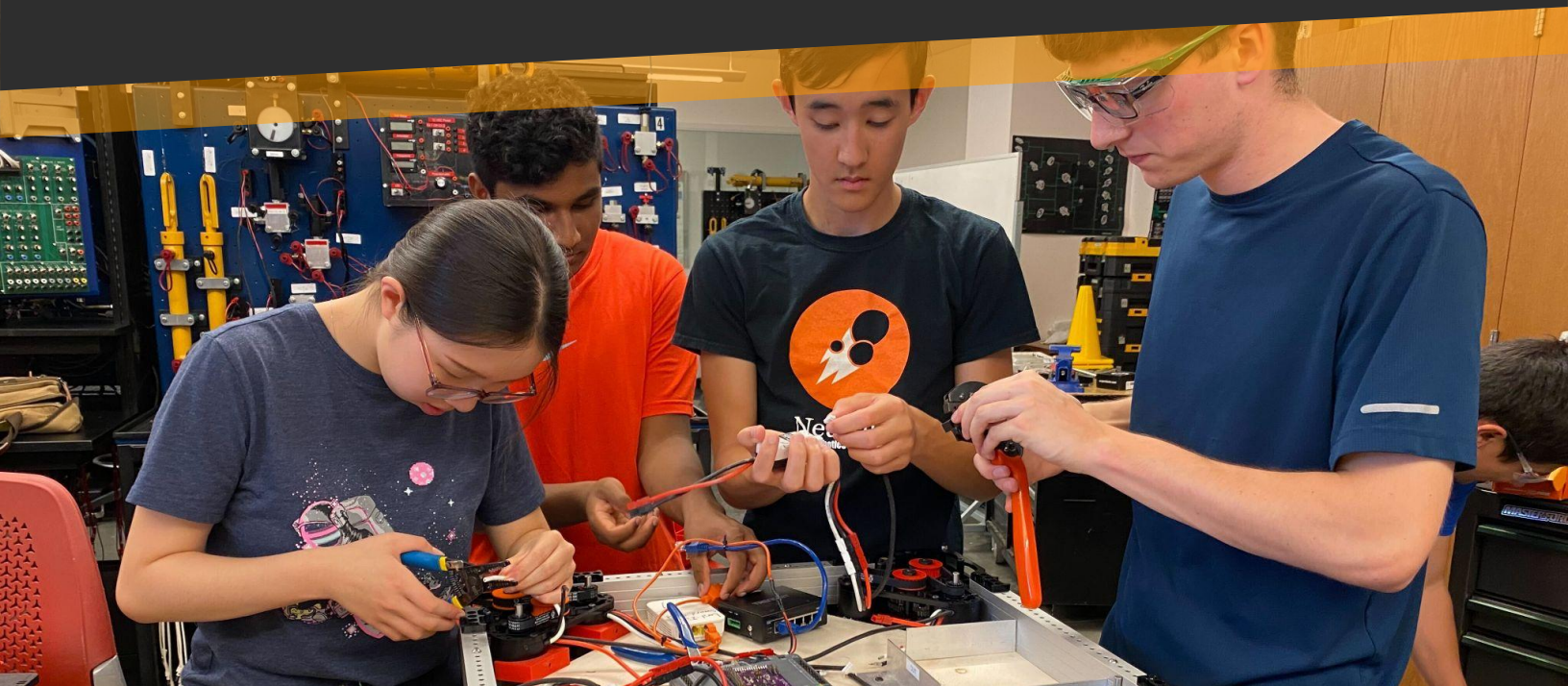
Intro to Controls // June 19-23

Intro to Graphics // July 5-7

Intro to CAD // July 17-20

Intro to Website // July 26 & 27

Advanced Design Projects // June 5-9, July 5-8, Aug 7-11



TEAM NEUTRINO

Cow Town ThrowDown

CTTD OFFSEASON COMPETITION

CowTown 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 2024'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 2024 KICKOFF

To simulate how kickoff operates every January, Neutrino hosted a mock kickoff for all of its members and mentors. Using a mock FRC Game called Melody Melee, new members were able to exercise skills acquired over summer learning sessions and prepare for the work to come in build season. This also gave members a chance to collaborate on designing and brainstorming for an FRC game, preparing them for kickoff on January 6th!

#3928 Team Neutrino
BUILD SEASON 2024

TEAM NEUTRINO
Kickoff

2024 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 (2024's Crescendo). This year we mapped out the Crescendo 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 Crescendo game 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

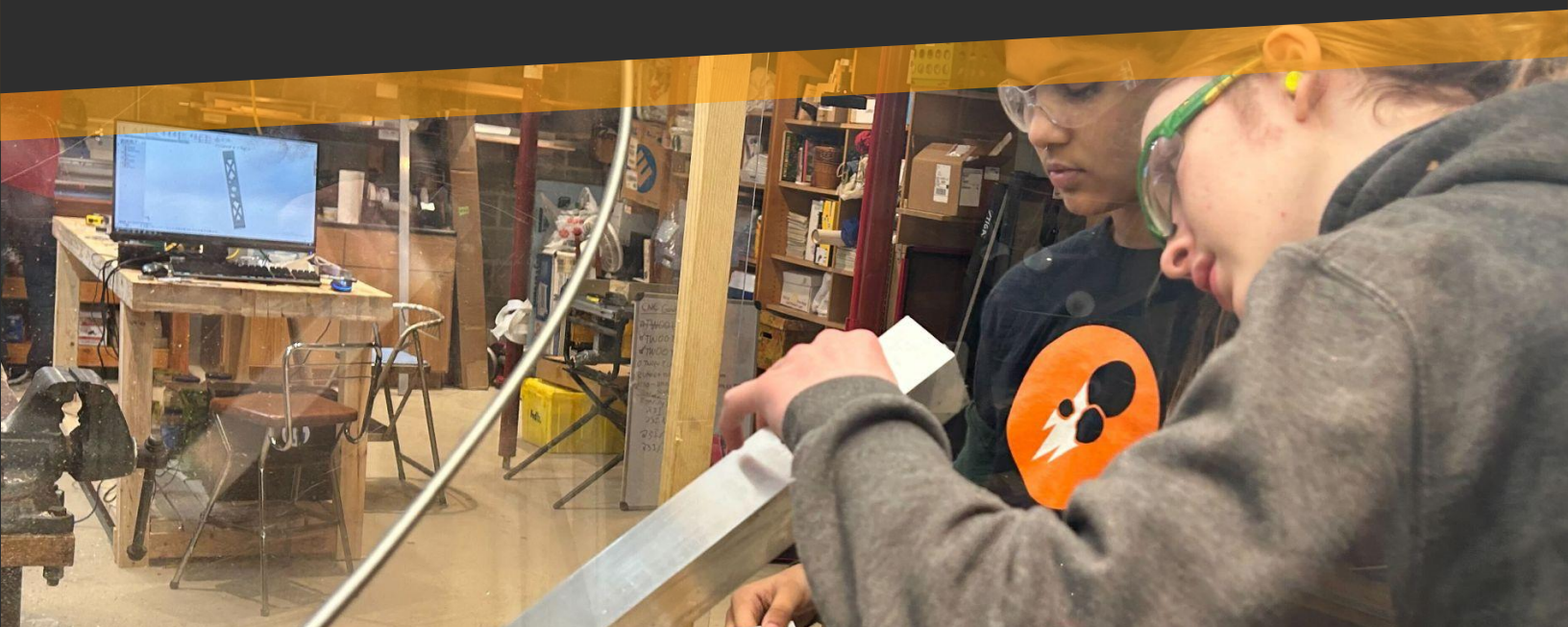
CAD SUBTEAM

Students design this year's Crescendo 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).

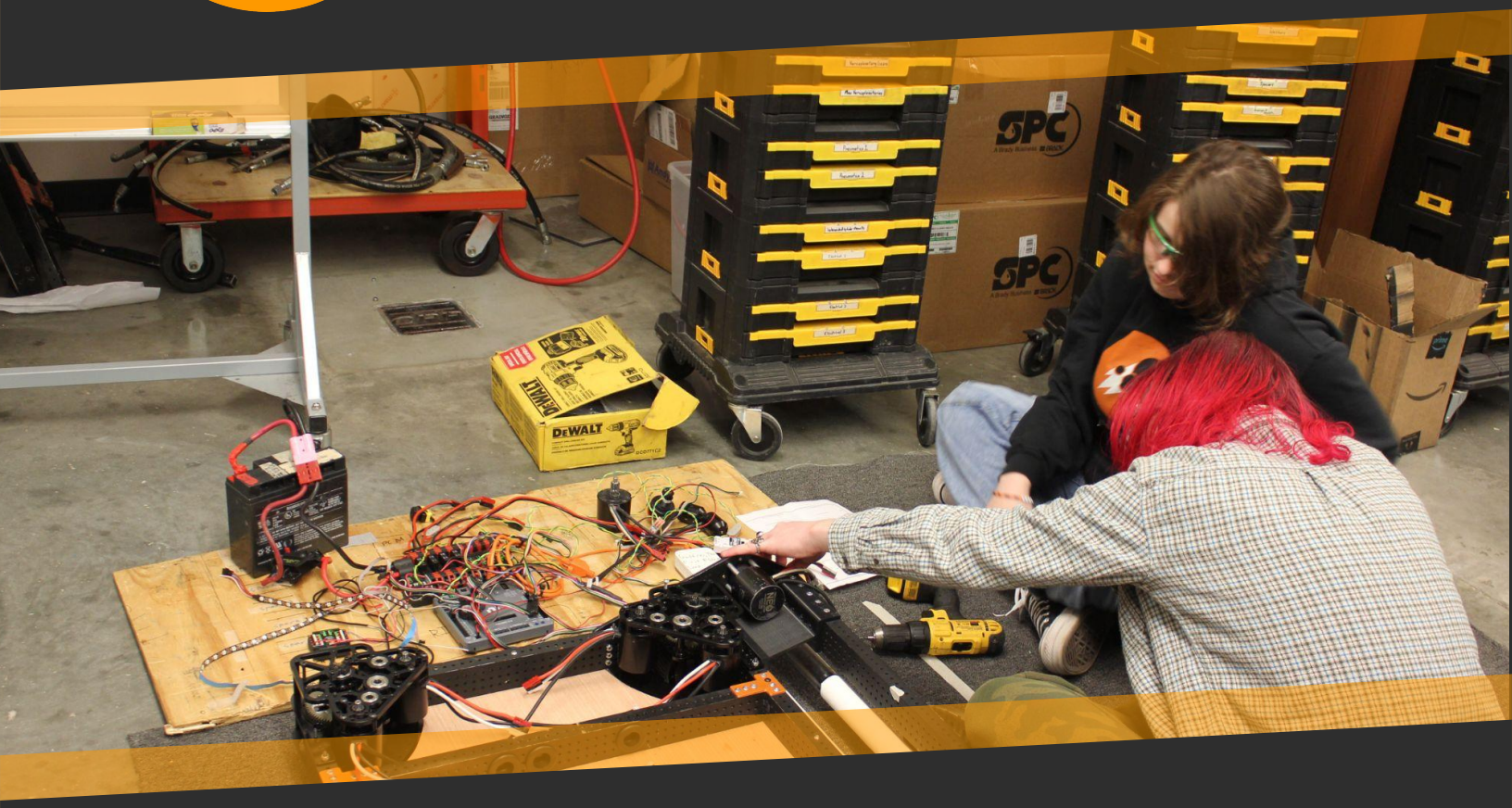
TEAM NEUTRINO
Subteams

MANUFACTURING SUBTEAM

After Team Neutrinos 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 Team Neutrinos 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 Team Neutrino practiced driving this year's 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 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.

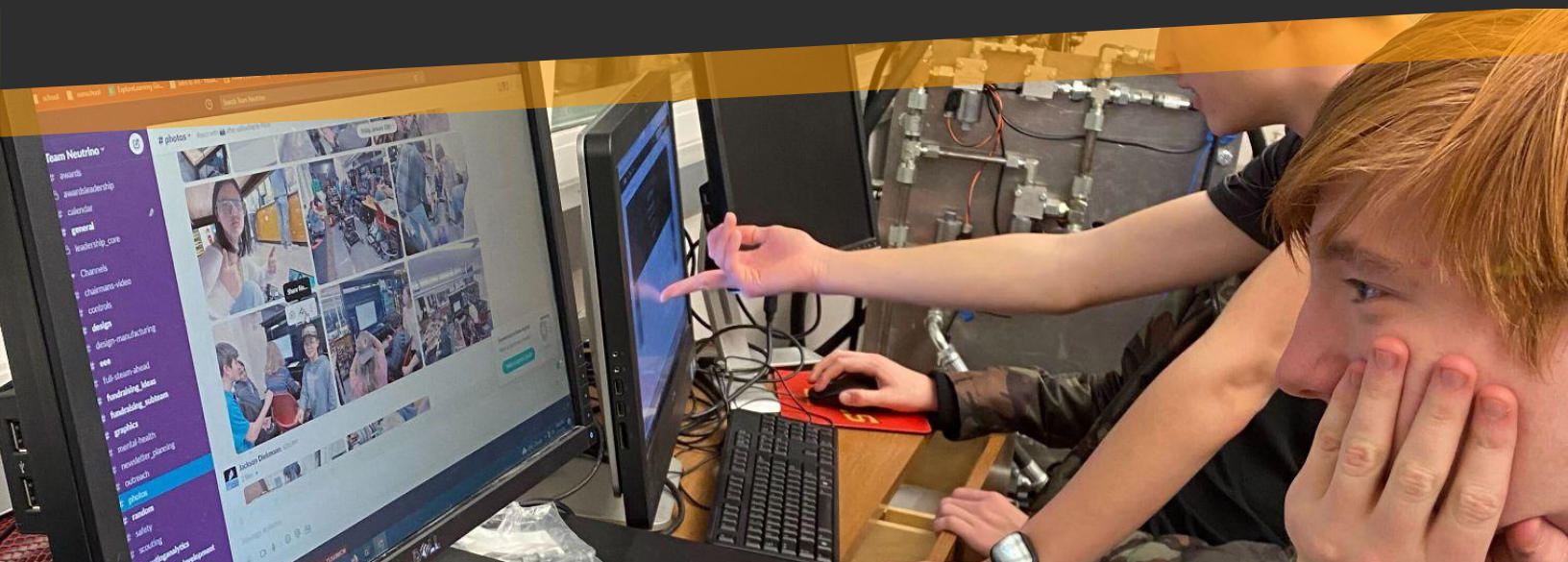
...the 4-H umbrella? Story County Fair, ... We have mutually beneficial relationships with some sponsors - organize sponsor visits where we provide them updates on xxx and invite them to continue investing in our STEM efforts…Claudia recommends a quote from sponsors. (copied Dagney's comment from Main Idea 3 tell a story about a sponsor we have a close relationship with and how we maintain that
for example, CIT Signature Transportation sponsor, Kim, a former team parent, enjoys being our first sponsor visit because she likes coaching our team members on how to present professionally) Jonathan mentioned at one sponsor visit, it was not just Neutrino sharing updates but also the sponsor sharing their projects. This seems like a mutually beneficial relationship. Same with ISU where we benefit from their sponsorship of location and mentors, and in turn, they get some of the students going to ISU and their graduate students get mentoring experiences. Stats?)

(Para 4 - On the global level, we share our surplus of resources. (In the past, did you donate to Haiti? Was that within the last 3 years? Can you use that and then follow-up with LTLA in 2023? What is your mission for sharing the legos? Instead of partnering, say you donated a giant tub of legos to the Life-to-Life Africa's Critical Care Center that supports orphans' basic needs and education. Talk about how these legos allow preschoolers and elementary kids the opportunity to develop fine motor skills, creativity, and problem

TEAM NEUTRINO
Subteams

GRAPHICS SUBTEAM

The Graphics subteam was responsible for upholding the team image through apparel, newsletters, printed materials, and more. During the build and off seasons, the subteam met to take photos, upload photos, edit videos, and curate newsletters.



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 businesses.

TEAM NEUTRINO
Subteams

OUTREACH SUBTEAM

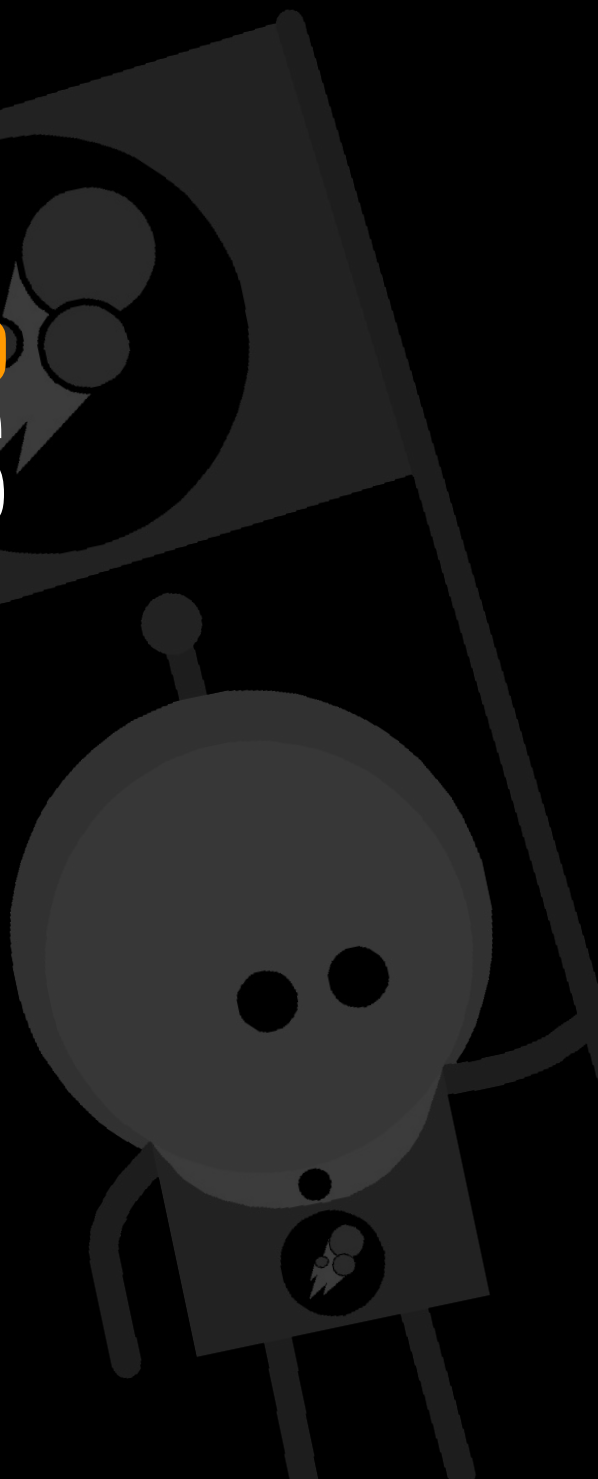
Team Neutrino takes pride in its plethora of outreach events in the Story Country community (many of which are detailed later in this binder). The team behind them is constantly at work all year long establishing new connections where Neutrinos can create new events or volunteer for existing initiatives.

TEAM NEUTRINO
Robot Reveal

2024 ROBOT REVEAL

To end the 2024 build season, Neutrino hosted our annual “robot reveal” event, where Neutrino family, friends, and the community attended a demonstration of our robot. 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 Team Neutrino and the community alike!

#3928 Team Neutrino
NEWSLETTERS



TEAM NEUTRINO
Newsletters

TEAM NEUTRINO NEWSLETTERS

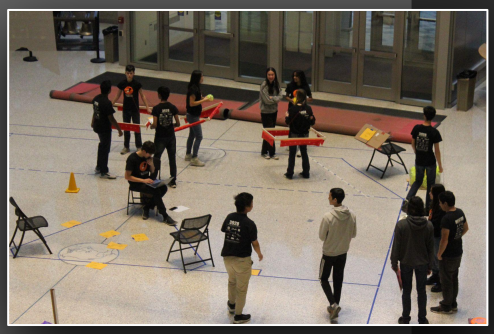
Throughout the year, Team Neutrino sends out newsletters to sponsors. Not only does this help maintain relationships with sponsors, but also keeps them updated on what the team has been up to. The Graphics subteam is responsible for writing, formatting, and choosing photos for each newsletter. These are sent out on a weekly basis during the build season, and also once every two months during the "offseason" to ensure relations year-round.

CRESCENDO

PRESENTED BY HAAS

TEAM NEUTRINO

2024 Week 1 Newsletter



Kick-Off

This past Saturday, the 2024 FRC game, Crescendo, was officially released to the public. Members of the team got together to collectively watch the game release and brainstorm strategies for the season. Several team members enacted a simulation of this year's game with a prototype field created by team mentors and alumni.

Monday Discussion

On Monday, the second official day of build season, students discussed potential strategies, design ideas, and game rules to kickstart the design process. Students spent 3 hours to recount what was learned during Saturday's Kickoff, while deciding on future steps for the build season.

Controls

Controls has been working on coding subsystems that are going to be on the robot. They are making progress on swerve, climb, and shooter subsystems, LEDs have also been a success. In addition to having fixed the testboards and testing code on them, they have also started battery testing to get NEWtrinos involved. They are also really enjoying their new computers.

Prototyping

Team Neutrino members spent the first week of build season prototyping many types of subsystems, including the shooter and the intake system. Through creative usage of wood blocks, wheels, and shafts, students were able to achieve success in implementing their prototyping ideas. The information the team gathered in prototyping will be critical to future decisions for robot development.

CRESCENDO

PRESENTED BY HAAS

TEAM NEUTRINO

2024 Week 2 Newsletter

Design

This week, the design subteam started and continued CADing mechanisms and the assembly for the swerve modules. The subteam worked on disassembling last season's robot, Scorpius as well as finalizing the size of the frame.

Controls

The controls team finished the intake subsystem and is currently working on other subsystems, including the arm, shooter, climb, and swerve. They also started testing code using test boards and simulation.

FLL Passion Project

On Friday, January 19th, team members gathered together in the computer lab to discuss and determine subgroups for the FLL summer camp project. They are currently planning to make timelines and are starting more in-depth planning.

Graphics

Team Neutrino members continued to work on the apparel for the team, finishing the back of shirts with sponsor logos. The Graphics subteam also finalized decisions and ordered apparel. The subteam made decisions for shots in the Impact video and started to record it. They also made thank you cards for sponsors.

FIRST

IOWA STATE UNIVERSITY College of Engineering

JOHN DEERE

3M

Chevron

Alliant Energy

INTUITIVE Foundation

Workiva

Danfoss

CRESCENDO

PRESENTED BY HAAS

TEAM NEUTRINO

2024 Week 3 Newsletter

Design

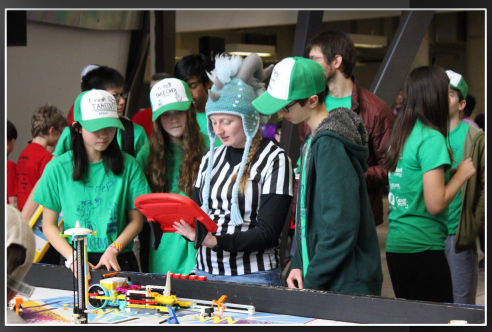
The design subteam continued to assemble the swerve modules and managed to finish them this week! They also finalized the drive train design and held design reviews for the drivetrain and intake. The subteam also made progress with assembly of the intake!

Controls

In controls, team members continued to tackle several projects such as working on simulating the arm and shooter accuracy. They also continued with interpolation and logic, as well as combining code for all the subsystems together!

Scouting

This week, the subteam met up together to discuss the spreadsheet and to finalize goals for the next time they meet. They are currently working on app layout and putting it into HTML. Their goal is to have it finished by next week and move on to working on functionality.



Iowa FLL State Championship

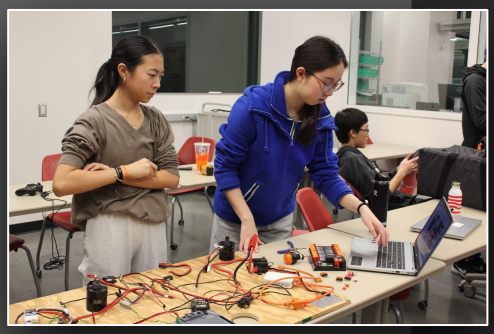
On the 27th and 28th of January, the Iowa FLL State Championship took place! Many of our Team Neutrino members and associates volunteered at this event or mentored teams that had made it to state. We were able to show some of these teams around our team space and show what we were working on. Congratulations to the Team Neutrino-mentored teams that made it to state!

CRESCENDO

PRESENTED BY HAAS

TEAM NEUTRINO

2024 Week 4 Newsletter



Controls

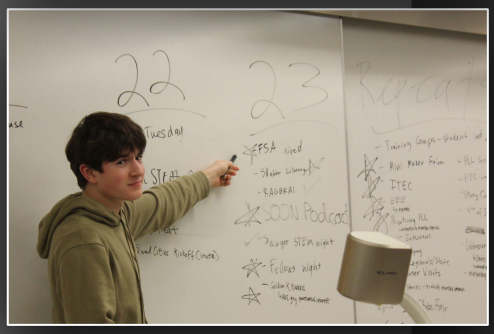
This week, the controls subteam continued to work on simulation, the shooter, interpolation, and wiring the robot. They also tested swerve and intake, while getting the arm and climb simulation to function.

Design

In design this week, team members began the manufacturing process and started assembling the intake. They're also nearly done with CAD and managed to finish the shooter design!

Graphics

In graphics, Team Neutrino members took photos, planned shots for the season wrap, and started filming clips of various subteams. Subteam members also worked on and finished the Robot Reveal flyer, which is now posted on the Team Neutrino website!

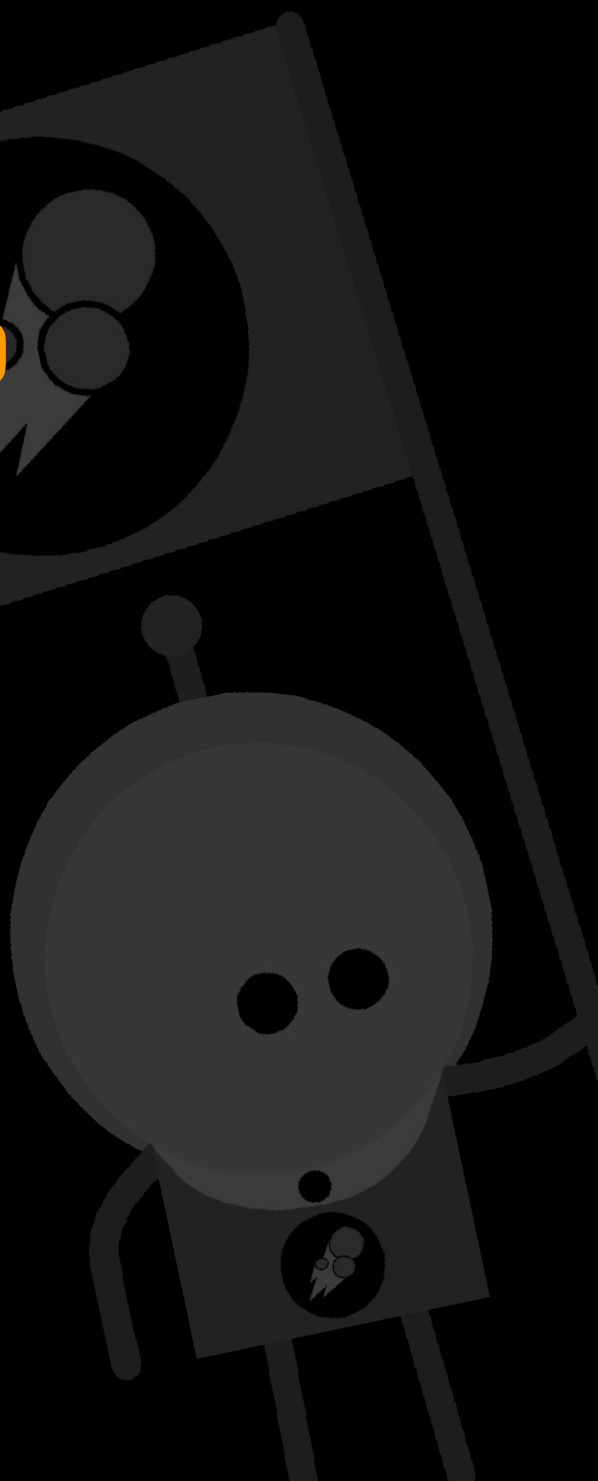


Awards

The Awards subteam has completed the Executive Summary this week! They also continued to work on the Impact Essay, a means through which Team Neutrino presents the main ideas of the team, while showcasing the legacy of Team Neutrino.

#3928 Team Neutrino

OUTREACH



TEAM NEUTRINO

CelebrAsian

MAY 2023

600 PEOPLE REACHED

CELEBRASIAN

During CelebrAsian, an event organized by the Iowa Asian Alliance, the team showcased the robot and interacted with community members. This event, for the second year running, was a great success, and we gathered valuable feedback and insights from the attendees. This event helped us improve the robot's capabilities and functionality for the future.

TEAM NEUTRINO

4th of July Parade

JULY 2023

8,000+ PEOPLE REACHED

CITY OF AMES 4TH OF JULY PARADE

Team Neutrino was proud to march in the 2023 4th of July Parade, hosted by the City of Ames. The community was thrilled to be at the event, and Neutrino was excited to show off last season's robot. There was a high attendance and many team members were able to talk with parents about FIRST.

TEAM NEUTRINO

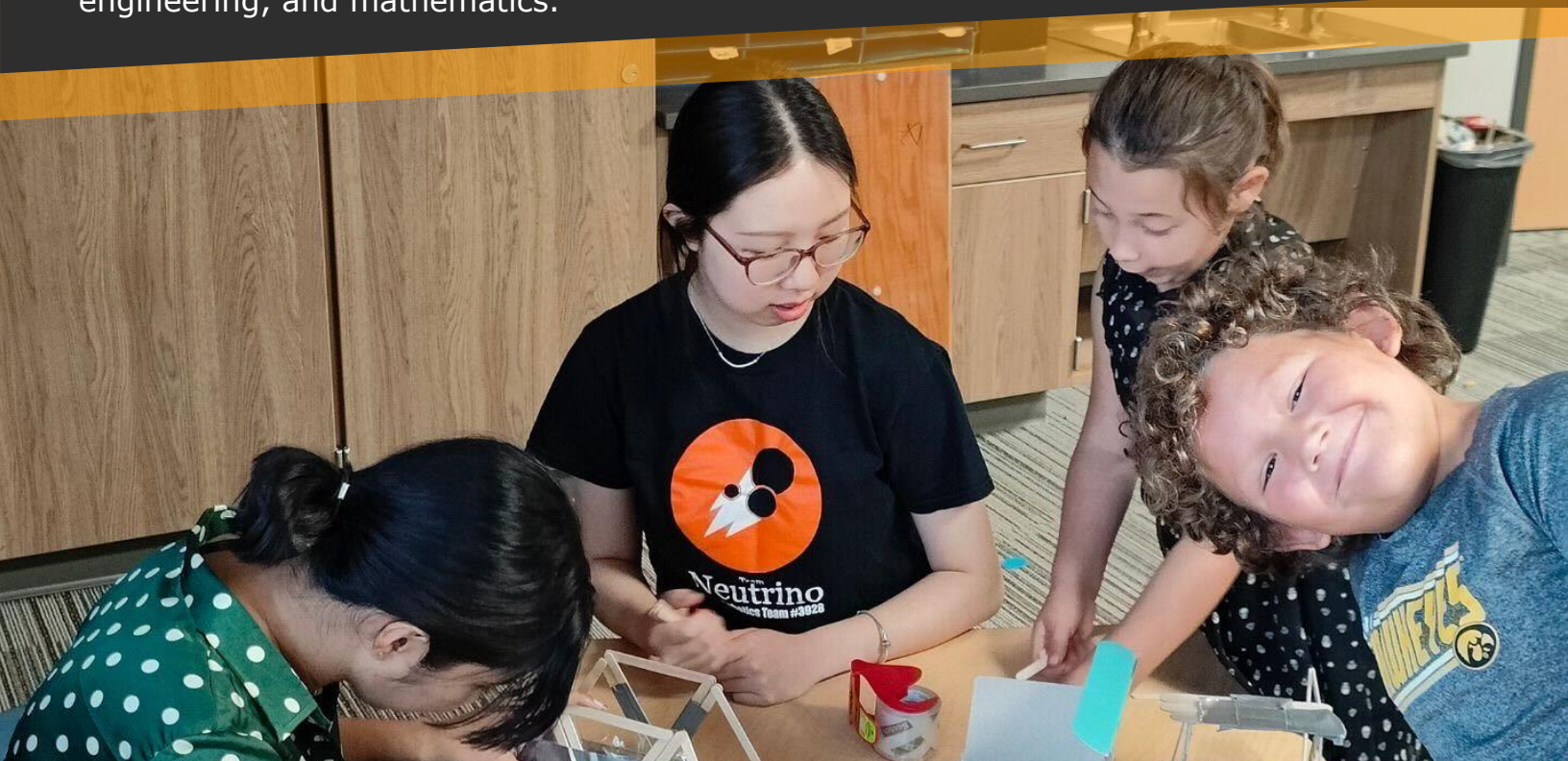
Enrich, Empower, Excel

JULY 2023

50 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

Story County Fair

JULY 2023

40 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

RAGBRAI

JULY 2023

178 PEOPLE REACHED

RAGBRAI

This year, we volunteered for the first time at Register's Annual Great Bicycle Ride Across Iowa, a non-competitive bicycle tour across Iowa. During the event, we displayed our robot Scorpius and offered refreshments to riders. We also splashed riders with water to help them beat the summer heat. Overall, this was a great opportunity to connect with our community.

TEAM NEUTRINO

Golden K Kiwanis Club

AUGUST 2023

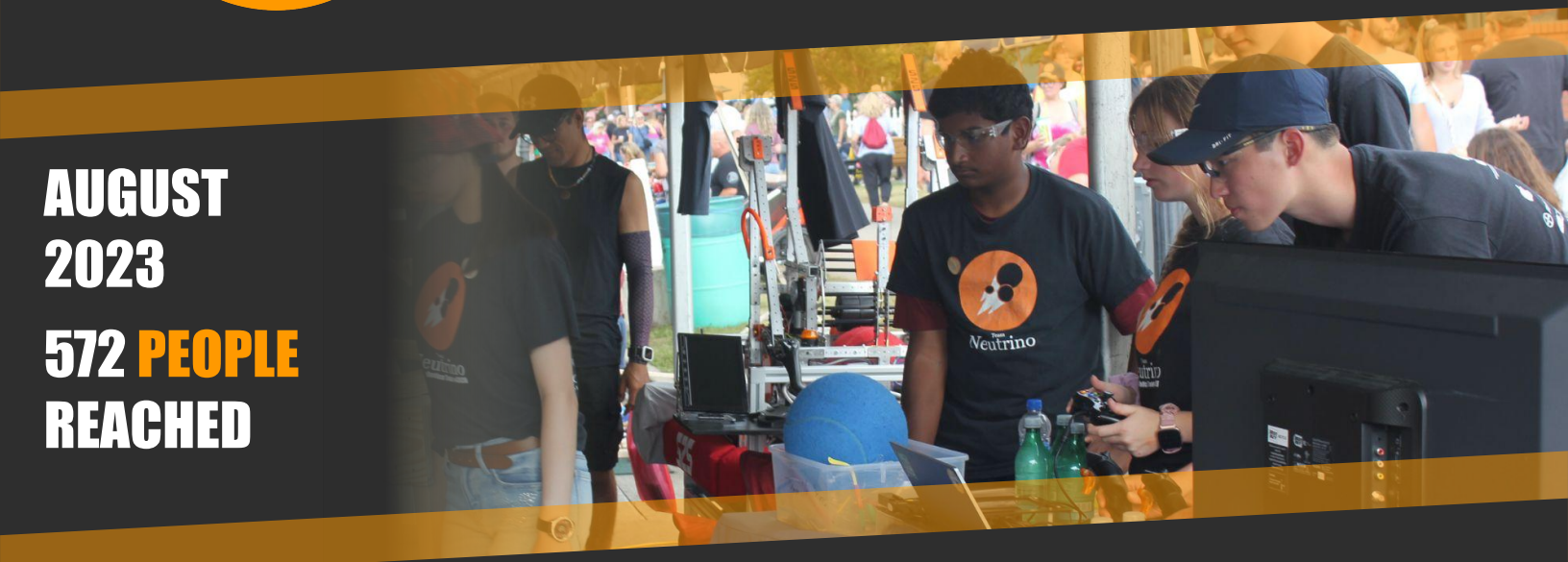
45 PEOPLE REACHED

GOLDEN K KIWANIS CLUB

Presenting and showcasing the robot at the Golden K Kiwanis Club allowed Team Neutrino to interact with the Kiwanis and maintain relations with them. After an in-depth presentation, the team was able to answer many questions regarding Team Neutrino, our robot, and the design process.

TEAM NEUTRINO

Iowa State Fair STEM Day



AUGUST 2023

572 PEOPLE REACHED

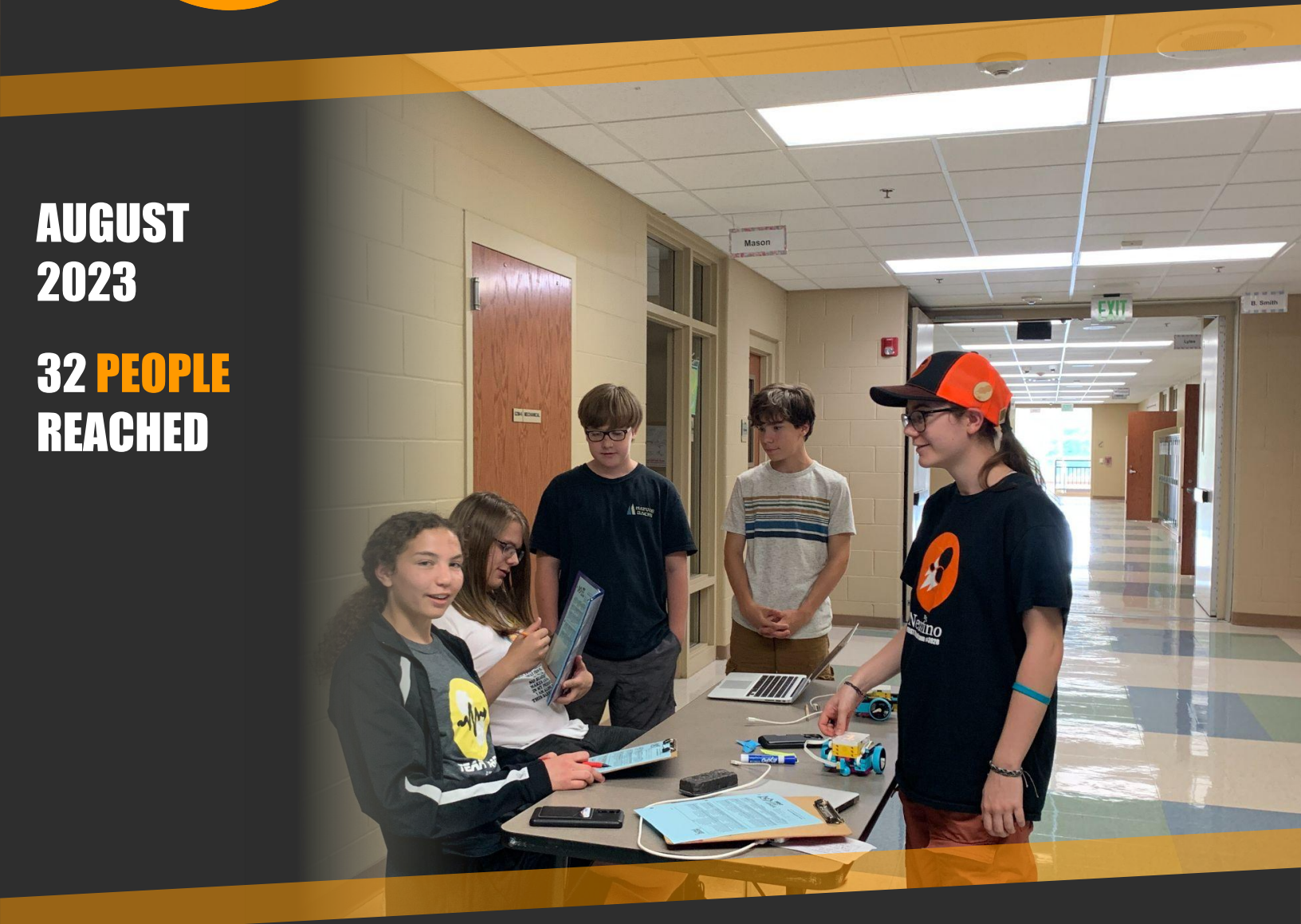
STEM DAY AT IOWA STATE FAIR

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. Neutrinos taught kids about STEM and told parents about all of the FIRST programs.

TEAM NEUTRINO
Newsletters

AUGUST 2023

32 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, allowing the team to stay involved within all levels of the FIRST community.

TEAM NEUTRINO

Des Moines Mini Maker Faire

SEPTEMBER 2023

900 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 had the opportunity to learn about local FIRST programs, such as FLL, through conversations with our team members.

TEAM NEUTRINO
ITEC Conference

OCTOBER 2023

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

Sawyer STEM Night

NOVEMBER 2023

485 PEOPLE REACHED

SAWYER STEM NIGHT

Team Neutrino members set up a stand at the annual Sawyer Elementary School STEM Night. Members demonstrated various snap circuit models and interacted with elementary schoolers. Team Neutrino was able to introduce many parents and kids to FIRST while handing out informational pamphlets!

TEAM NEUTRINO

Ames FLL Scrimmage

DECEMBER 2023

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

Ames FTC League Meet

NOVEMBER 2023

400 PEOPLE REACHED

AMES FTC LEAGUE MEET

Team Neutrino was able to volunteer at a local FTC event. Team members took on a variety of tasks in order to help the event run smoothly. Our team was able to interact with younger members of FIRST and get them interested in FRC and Team Neutrino.

TEAM NEUTRINO
Fellows STEM Night

FEBRUARY 2024

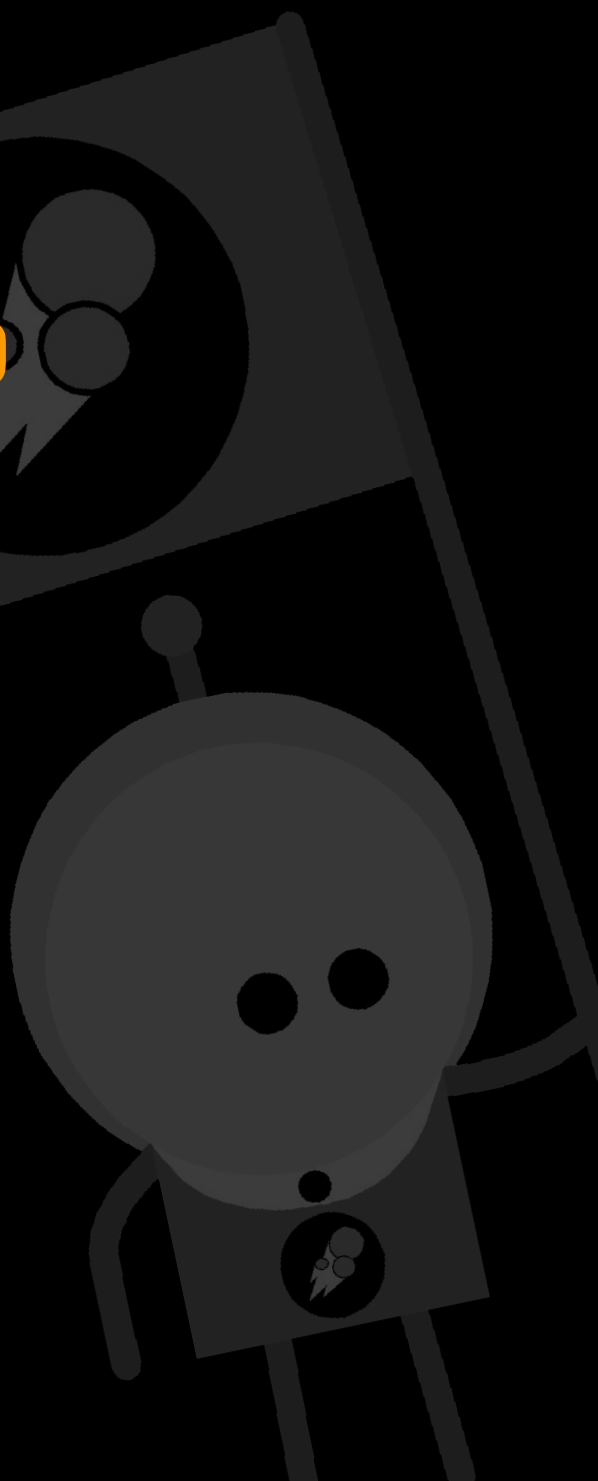
485 PEOPLE REACHED

FELLOWS STEM NIGHT

Team Neutrino members set up a stand at the annual Sawyer Elementary School STEM Night. Members demonstrated various snap circuit models and interacted with elementary schoolers. Team Neutrino was able to introduce many parents and kids to FIRST while handing out informational pamphlets!

#3928 Team Neutrino

MENTORING



TEAM NEUTRINO
Mentored Teams

Purple Puffin Puppies
Mentors - Morgan, Vienna, Cale, Becky

T-Rex Takeover
Mentors - Allen, Chetas, Laura C

Snurtle Dogs
Mentors - Amaya, Ellen

FLL CHALLENGE TEAMS

TEAM NEUTRINO
Mentored Teams

Happy Little Goats Wearing Happy Little Sweaters
Mentors - Anika, William, Meabh

Atomik Wasteland
Mentors - Subaita

Super Sarcastic Scribbles - St. Cecilia Elementary
Mentors - Lynda

FLL CHALLENGE TEAMS

TEAM NEUTRINO
Mentored Teams

Edwards Elementary
Mentors - Aneesh

The Conpuzzlers
Mentors - Morgan

FLL CHALLENGE TEAMS

TEAM NEUTRINO
Mentored Teams

Sawyer Elementary
Mentors - Ash

Lego Cars - Edwards Elementary
Mentors - Anirudh, Logan, Adam, Josh

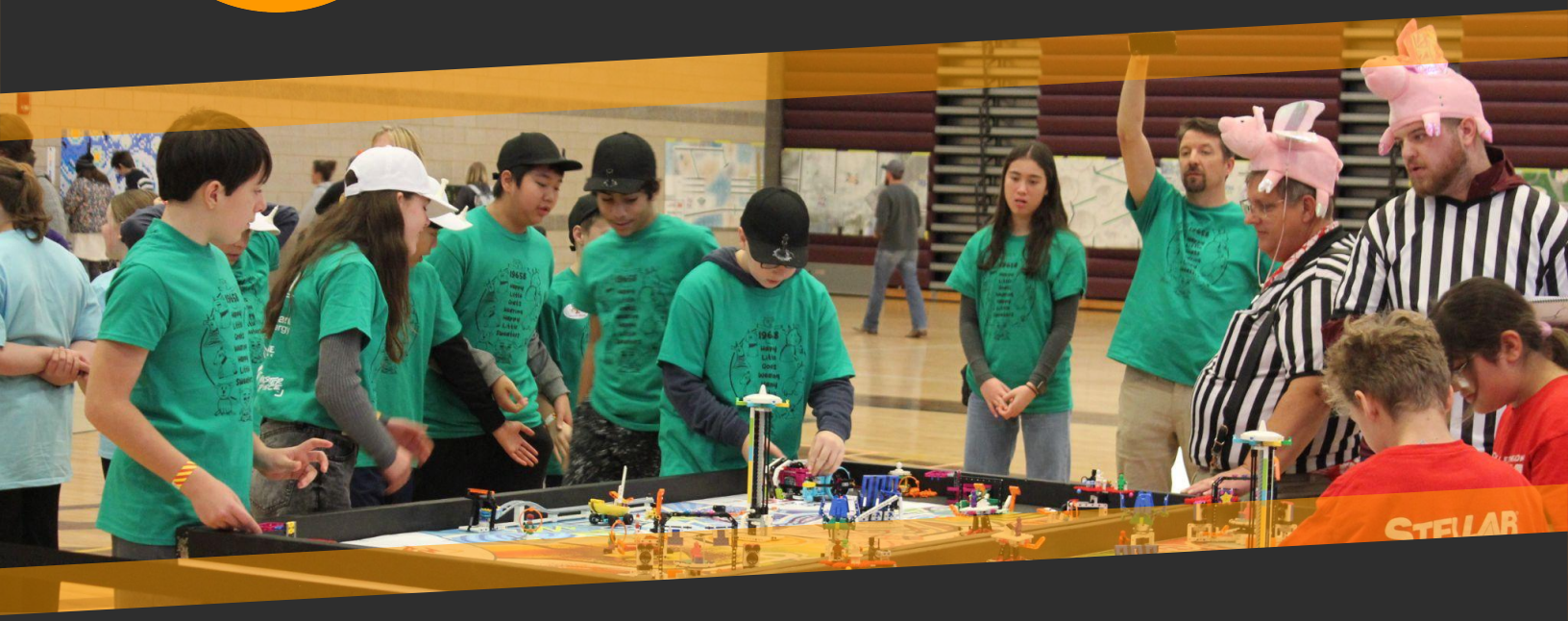
FLL EXPLORE TEAMS

TEAM NEUTRINO
Mentored Teams

AMES FLL SCRIMMAGE

The Ames Middle School FLL Scrimmage was held at AMS and allowed out students to connect with teams they mentored this past FLL season. 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



WEBSTER CITY FLL REGIONAL

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 Prime. They also made a poster to present their overall learning and progress at the end of the year.

TEAM NEUTRINO
Mentored Teams

IOWA FLL STATE CHAMPIONSHIP

During the Iowa FLL State Championship, Team Neutrino members mentored teams and aided them in efforts to cooperate during matches, as well as present for judges to win awards. Team members also volunteered at this event, and it was a great way to stay involved within the FIRST community!

#3928 Team Neutrino
SPONSOR VISITS

TEAM NEUTRINO

Frontline Sponsor Visit

JUNE 2023

25 PEOPLE REACHED

FRONTLINE SPONSOR VISIT

Our team had the opportunity to visit one of our sponsors, Frontline Bioenergy. We were able to present to a large number of their employees and answered questions about our team and robot. This visit was a great way to continue to connect the people at Frontline!

TEAM NEUTRINO

Danfoss Sponsor Visit

JULY 2023

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

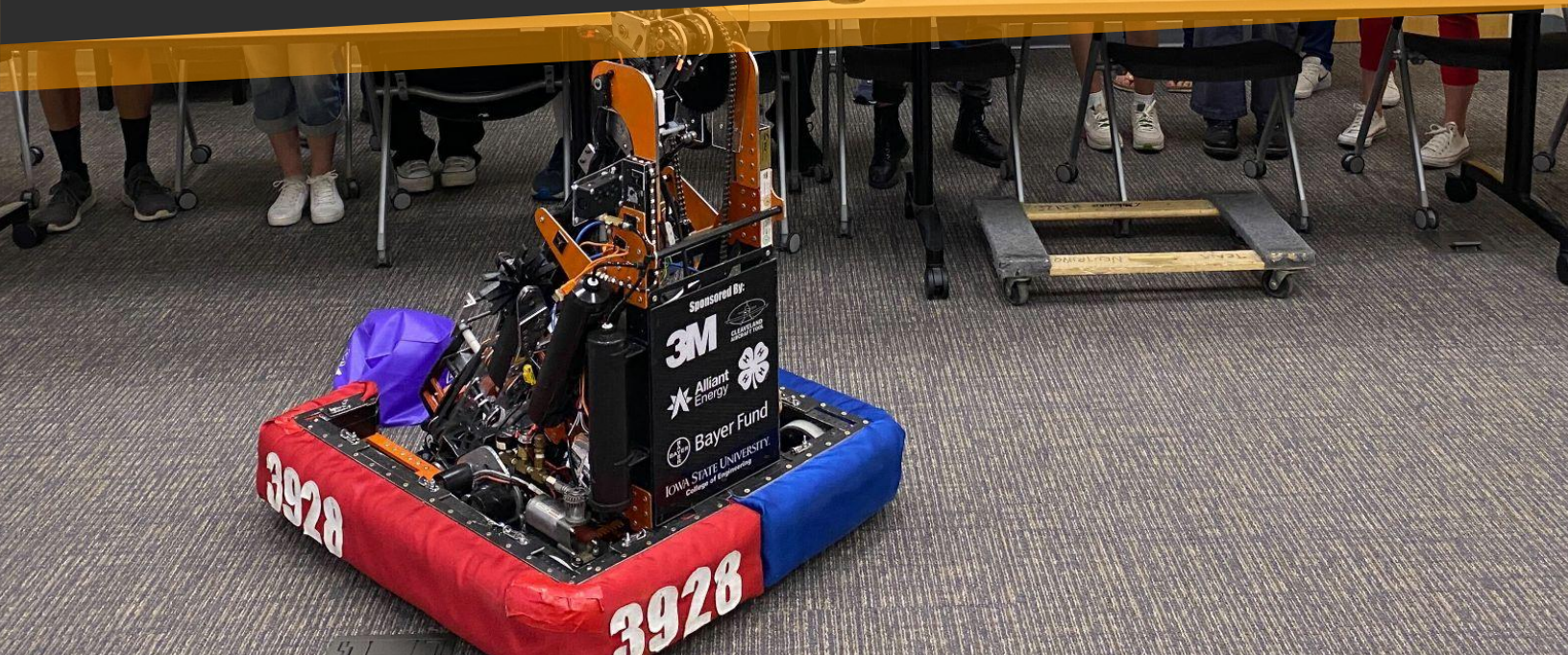
REG Sponsor Visit

JULY 2023

13 PEOPLE REACHED

REG SPONSOR VISIT

Neutrino visited one of our sponsors, REG, to present about our past season and our team accomplishments. At this meeting, we demonstrated our team to both a room of employees and an online zoom call. This visit was a great meeting with a recurring sponsor, and allowed the team to sustain our relationship with REG.



TEAM NEUTRINO

Bayer Sponsor Visit

JULY 2023

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, 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
Workiva Sponsor Visit

AUGUST 2023

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.

SHARE
INSPIRE
CREATE
DESIGN

TEAM NEUTRINO - 2024 SEASON

For more information, visit

TEAMNEUTRINO.ORG @FRCNEUTRINO