

## Allendale Robotics

# 2025-26 Season

## Sponsor Packet



K-1st Grade



2nd-3rd Grade



4th-5th Grade



6th-8th Grade



9th-12th Grade



**VEX 123**

**VEX GO**

**VEX IQ**  
ROBOTICS  
COMPETITION

**VEX VS**  
ROBOTICS  
COMPETITION

**FIRST  
ROBOTICS  
COMPETITION**

Allendale Robotics, entering its 15th season, offers a unique opportunity for students in Allendale and surrounding communities to gain a better understanding of engineering concepts through FIRST and VEX Robotics programs. Our high school team, The TriSonics, faces the challenge of building a full-sized robot in six weeks. FIRST (For Inspiration of Science and Technology) students are taught to use principles of CAD, programming, web design, graphic animation, marketing, and communication. Through robotics programs, students will have opportunities to work on real-world problems with software such as Python and SOLIDWORKS. This helps students learn skills that they can later apply to college and the workforce.

In the fall of 2021, Allendale Robotics transitioned all the lower elementary and middle school robotics teams to VEX Robotics. With the VEX programs, we are providing students programs that build on each other from K-8 and have smaller team formations meaning students will have more hands on with assembly and programming, thus empowering more students with confidence. We have several teams geared for all grade levels: VEX 123 (K-1st Grade), VEX GO (2nd & 3rd Grade), VEX IQ (4th& 5th Grade), VEX Robotics Competition (6th- 8th Grade).

To offer these programs to the students in your community, we need your help through funding and sponsorship. Your organization has the opportunity to donate through a monetary gift or a donation of various resources, as well as volunteer-based mentors to help our students grow and succeed. If you or your employees would like to donate their time, please feel free to contact us.

Thank you for your time and consideration. We look forward to working with you and your company towards our goal of creating a more open-minded and hard-working generation.

Sincerely,

Chad J. Potinsky Allendale Robotics Coach  
Sr. Advanced Manufacturing Engineer (ODL, Inc.)

Allendale Robotics / Allendale High School  
10760 68th Avenue  
Allendale, Michigan 49401

E-mail: [chad@allendalerobotics.com](mailto:chad@allendalerobotics.com)

## Sponsorship

Robotics teams are supported by a strong network of corporations, foundations, educational and professional institutions, and individuals. This support, including financial contributions, in-kind donations, employee volunteering, and mentoring, provides vital resources for our programs.

With the support of great organizations like yours, we can make the opportunities offered through FIRST and VEX Robotics available for the students of the Allendale, Jenison, Homeschool, and surrounding communities.

Running a FIRST and VEX Robotics team(s) takes funding, mentors, facilities, equipment, and materials. It is through sponsors that we can provide these resources for the team. Funding for the Allendale Robotics helps reduce the competition fees, travel expenses, materials for the robot, team uniforms, and support.

Investing in the future is always a great opportunity. As we invest in the students on the Allendale Robotics team, we are investing in our future. We will inspire students to pursue careers in science, technology, and engineering. It is this investment that ensures our community, state, country, and world of a better future.

## Benefits of Sponsoring

### External / Marketing

- Helps to inspire the future engineering and technical workforce
- Provides renewed inspiration to company engineers and employees
- Creates partnerships between corporations and schools
- Provides brand / corporate awareness
- Demonstrates community commitment
- Networking opportunities
- Strengthening company reputation in the community

### Internal Benefits

- Provides a talent pool for internships
- Provides employee volunteer opportunities
- Improves employee attitudes about company
- Helps to attract and retain good employees
- Creates a pipeline for interns and future employees

### Benefits to Students and Community

- Inspires students in science and technology
- Makes a connection between classroom learning and real-world application
- Provides opportunities by developing technical skills
- Encourages careers in science and technology
- Build teamwork and collaboration
- Encourages communication skills
- Builds self esteem
- Builds skills that can be used in the real world
- Build a technologically literate workforce
- Teaches creativity and problem-solving skills
- Helps to get students to try things outside of their comfort zone
- Teaches about time / project management

### Sponsorship Opportunities

- Provide financial support
- Supply parts, equipment and/or facilities
- Involve employees as mentors and/or volunteers
- Provide internships for students
- Offering scholarships for students (either to help with fees or for furthering education)



**vEX 123**

**vEX GO**

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ROBOTICS  
COMPETITION

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COMPETITION

**FIRST**  
ROBOTICS  
COMPETITION



## Who We Are

Allendale Robotics has several teams geared for all grade levels: VEX 123 (K-1st Grade), VEX GO (2nd & 3rd Grade), VEX IQ Competition (4th & 5th Grade), VEX Robotics Competition (6th- 8th Grade), and FIRST Robotics Competition (9th-12th Grade).

Even though we are based in Allendale, we reach out to other school districts. We have students from Allendale, Coopersville, Homeschoolers, Hudsonville, Jenison, and other surrounding Christian schools. In the past 14 years, we have had students from 24+ schools participate in our programs!

## What We Learn

### Leadership Skills

- Workforce Training
- Responsibility
- Public Speaking
- Team Relationships
  - Communication
  - Working with Adults
- Critical Thinking
- Problem Solving

### Technical Skills

- 3D SolidWorks
- 2D Detailing
- Programming
  - VexCode (Scratch)
  - Python
- Electric Wiring
- Pneumatic Plumbing
- Machining
- Additive Manufacturing
- CNC Routers

### Business Skills

- Applying STEM Principals
- Marketing
- Business Development
- Budgeting/Money Management
- Connecting with Community
- Outreach

## How You Can Help

There are many costs associated with running each team. We look for grants and sponsorships to help us fund our programs and provide opportunities for students that will last a lifetime. Help us reach our goal by supporting Allendale Robotics. All donated money can be tax-deductible.



# Allendale Robotics



Community Sponsorship provides the Allendale Robotics teams the opportunity to mentor and inspire a growing number of students in the Allendale, Coopersville, Hudsonville, Jenison, Homeschool, local Christian schools, and other surrounding school districts. Please consider making an investment in the future of business and industry, and the individuals who will lead the way. All contributions may be made through Allendale Public Schools and are tax-deductible.

## Sponsorship Levels

**Diamond - \$5,000** – Company Name announced at each competition

**Platinum - \$2,500** – Company logo and name placed on the robot

**Gold - \$1,000** – Company name listed on T-shirt

**Silver - \$500** – Company name on all promotional materials

**Bronze - \$250** – Company name and logo on website



*\*If you cannot support us financially, see out our website([allendalerobotics.com](http://allendalerobotics.com)) to donate materials needed.*

Please complete and return the form below with your contribution

**Checks can be made to “Allendale High School” and in the memo “Allendale Robotics”**

Contribution Amount: \$ \_\_\_\_\_

Please Send Receipt  Please send W9 Form

And / Or

Materials / Resources: \_\_\_\_\_

Sponsor Name: \_\_\_\_\_

*(Please list Company / Business name as you want it to appear on the Website, Shirts, & PR Material)*

Sponsor Contact: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip code: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Please email a high-resolution (PNG or Raster format) Logo to:

Allendale Sponsorship Team: [Sponsorship@AllendaleRobotics.com](mailto:Sponsorship@AllendaleRobotics.com)

Please Mail the Form, Checks, and any other materials to:

Allendale Robotics / Allendale High School

10760 68<sup>th</sup> Ave.

Allendale, MI 49401



# Allendale Robotics



vEX 123

vEX GO

vEX IQ.  
ROBOTICS  
COMPETITION

vEX VS.  
ROBOTICS  
COMPETITION

FIRST  
ROBOTICS  
COMPETITION

Thank you for choosing to sponsor Allendale Robotics.

If you cannot support us financially, please consider these equally important alternatives.

#### **Equipment and Supplies**

- Laptops / Computers
  - Our CAD Workstations are going to be obsolete due to the Windows 10 Upgrade incompatibility
- Printers or a Plotter
- Office type supplies
  - 11x17 Paper
  - Dry Erase Board Supplies
  - Printer Supplies (Ink, etc)
- Machine Tooling
  - End Mills
  - Router Bits
  - Drills
  - Taps (8-32, 10-32)
  - Files, Deburring Tools, Etc.

#### **Community Contribution**

- Detail Machining / Laser Cutting / Waterjet
- Food and Meals
  - Pop / Water
  - Saturday Lunch for the team
  - Lunch for an Event
- Store Discounts
- Gift Cards (Meijer, Sam's, Costco, Amazon, Etc.)
- Volunteer Mentoring (Fabrication, Programming, Design, Marketing, Promotion, Event Judging, etc.)

#### **Raw Materials**

- 6061 Aluminum Tube Stock
  - Contact team for sizes
- 6061 Aluminum Angle
  - Contact team for sizes
- 6061 Aluminum Bar Stock
  - Contact team for sizes
- Polycarbonate Sheets (1/16", 1/8", 3/16", 1/4")
- Acetyl (Delrin) Stock
  - Contact team for sizes
- 3D Printer Materials (PLA-CF, PPA-CF, PAHT-CF, TPU)

#### **Fasteners (Button / Flat Head Cap Screws)**

| <b>BHCS</b>  | <b>FHCS</b>  |
|--------------|--------------|
| 8-32 x 1/4   | 8-32 x 1/4   |
| 8-32 x 3/8   | 10-32 x 1/4  |
| 8-32 x 1/2   | 10-32 x 3/8  |
| 10-32 x 3/8  | 10-32 x 1/2  |
| 10-32 x 1/2  | 1/4-20 x 1/2 |
| 10-32 x 3/4  |              |
| 10-32 x 1    |              |
| 1/4-20 x 3/8 |              |
| 1/4-20 x 1/2 |              |

Please contact our Sponsorship team with any questions

Allendale Sponsorship Team: [Sponsorship@AllendaleRobotics.com](mailto:Sponsorship@AllendaleRobotics.com)

Please send donations to:

Allendale Robotics / Allendale High School  
10760 68<sup>th</sup> Ave.  
Allendale, MI 49401

# FRC: The TriSonics

## What is FRC?

FIRST Robotics Competition (FRC) is an annual robotics program. Students are guided by mentors in the fields of **S**cience, **T**echnology, **E**ngineering, and **M**athematics. Every January teams receive a challenge that must be completed by building a working robot within six weeks. During this time, students strategize, design, prototype, build, program, and test robots. The team must work together to solve challenging problems with limited resources, materials, time, and budgets. This teaches real-life scenarios that businesses and organizations face.

After this six-week period, Michigan teams compete in district events that measure the effectiveness of the robot. FRC teams compete to earn points to qualify for the Michigan District Championship. If teams rank high enough at the District Competitions, they qualify for the FIRST Championships in Houston, TX. There they will compete against FRC teams from around the world.



TriSonics at Mt. Pleasant after being Finalist and winning the Excellence in Engineering Award

## Who We Are

Team 4003 is based in Allendale, Michigan. Founded in 2012, we include students from Allendale and the surrounding communities. Since 2012, our team has grown dramatically with over 35 students. Young men and women, working alongside mentors, dedicate their time to the success of the team. Students work an average of 20 hours a week, showing passion for what they do.

## About the Team

Our program emphasizes student involvement in all aspects of the team's development of strategy, planning, communication, design, fabrication, and programming. Students can specialize in one or more subgroups within the team.

In 2025, the team had 13 volunteer mentors working with the team of 32 students. They inspire and encourage students to develop skills and take risks.



Anyone can volunteer to assist the team. Everyone is encouraged to attend free competitions.



Our teams are more than robots. Students develop a business plan, seek sponsors, and present a positive image of our team. The students are given hands-on experience providing them with skills that can lead to opportunities and success for the future.





## K-1st Grade

2nd-3rd Grade



VEX IQ  
ROBOTICS  
COMPETITION



4th-5th Grade

6th-8th Grade

Allendale Robotics pioneered VEX IQ to our 6th grade students in the 2019 Season. In 2021 Allendale Robotics decided to convert all our Elementary and Middle School students to VEX teams. Our approach is to form smaller teams that will allow more students to have hands-on building and programming skills. VEX is also structured differently, allowing teams to compete more often in leagues and tournaments. This allows teams to make continuous improvements to their robots between competitions.



## K-1st Grade

These students are given a 123 robot that is programmable without a computer! Using the VEX Coder and physical cards, students can learn real programming away from screens. They learn how to program their robot to do specific commands from moving left and right to playing different sounds! Students learn the basics of programming and problem solving in a fun environment.



vEX.123

vEX.GO

vEX.IQ.  
ROBOTICS  
COMPETITION

vEX.V5.  
ROBOTICS  
COMPETITION

K-1st Grade

**2nd-3rd Grade**

4th-5th Grade

6th-8th Grade

vEX.GO

**2nd-3rd Grade**

The VEX GO Competition is a competition that takes place right in the classroom. The students will go head-to-head in online challenges that drive them to put their STEM skills to the test in a uniquely engaging setting. Along the way, they'll learn scientific concepts, teamwork, and perseverance. The VEX GO Kits provide a building environment that we strive to keep 1-to-1 with the students for the best experience. Each student also gets a Tablet to use to learn to program the robot using VexCode (Scratch based programming) and to drive the robot. The VEX GO program is a stepping stone into the next level of robotics experience.





K-1st Grade

2nd-3rd Grade

## 4th-5th Grade

6th-8th Grade



### 4th-5th Grade

In the VEX IQ program, this is the first level of programs where students will start to competitively compete in Leagues and tournaments.

Students will work with the VEX IQ building system to create a robot to achieve game challenges for the season. The robots are to be built and programmed to work both autonomously (using only robot code and sensors) and students operate with controllers.

The skills learned from the VEX GO program will benefit students in the IQ program with the same style of build and programming. Advanced programming techniques will also help to prepare the students for the next level of robotics.

Students in this level of competition will also could advance to the State Championship and the World Championship. In the past teams, we have had teams attend the World Championship in Dallas, TX.

**vEX.123****vEX.GO****vEX.IQ.  
ROBOTICS  
COMPETITION****vEX.V5.  
ROBOTICS  
COMPETITION**

K-1st Grade

2nd-3rd Grade

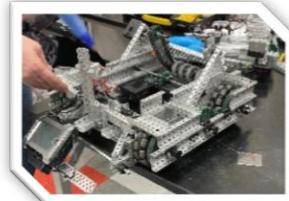
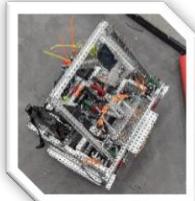
4th-5th Grade

**6th-8th Grade****vEX.V5.  
ROBOTICS  
COMPETITION****6th-8th Grade**

Our VEX V5 Teams bring our students to the next level of competition with 2-vs-2 matches and game challenges to get students to start to think more on strategy. The V5 teams average 4 students per team, giving them all more hands-on experience. Students, with guidance from parent facilitators, build innovative robots for competing in Leagues and Tournaments. Teams will compete in 1) Skills challenges (independently). 2) Autonomously (programmed routines) & 3) Driver operated competitions.

The robots are an 18" cube in size and built out of metal VEX parts and incorporate motors, sensors, vision, and other elements to help the robot achieve point scoring tasks. The robot design is driven by the students' imaginations and strategy. Programming is accomplished using the VexCode Scratch language or Python for advanced techniques.

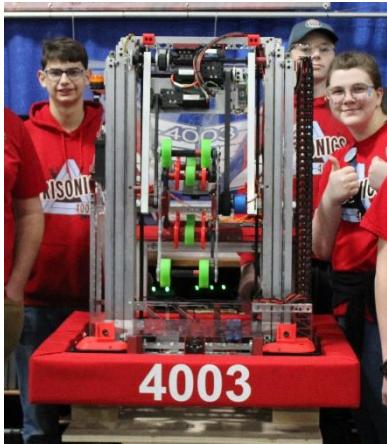
Since we started the V5 program in 2021, we have had many teams advance to the State Championship, get invited (and attend) the C.R.E.A.T.E. Invitational in Iowa, and some teams have advanced to the World Championship in Dallas, TX.



## The TriSonics: 14 years of winning

Every year, the TriSonics students and other FIRST teams are introduced to a new game and challenge they must complete. These games require teamwork and dedication from each and every team to test the skills of each individual member. Founded in 2012, our rookie program got off to a great start; here are some of our recent accomplishments.

For more information regarding the games and details visit: [www.usfirst.org/frc](http://www.usfirst.org/frc)



### 2025 – Reefscape

Mt. Pleasant Event

- Finalists
- Excellence in Engineering Award

West Michigan District Event

- Quarter Finalists
- Quality Award

State Championship DTE Energy Division

- Ranked 29th in Qualifying
- Excellence in Engineering Award



### 2024 - Crescendo

Lake City District Event

- Quality Award
- District Event Quarter Finals

West Michigan District Event

- District Event Quarter Finals
- Lydia H. won Dean's List Semi-Finalist

State Championship

- Lydia H. won Dean's List Finalist



### 2023-Charged Up

Standish-Sterling District Event

- Industrial Design Award
- District Event Semifinalist

West Michigan District Event

- Quality Award
- District Event Semifinalist

Michigan State Championship Consumers

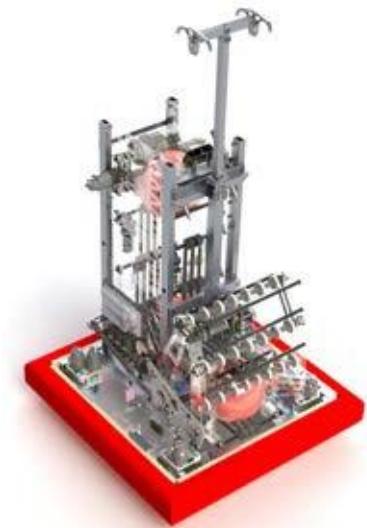
Energy Division

- Excellence in Engineering Award
- Division Semifinalist

FIRST Championship Houston (Worlds) Curie Division

- Subdivision Semifinalist





## 2022-Rapid React

Saint Joseph District Event

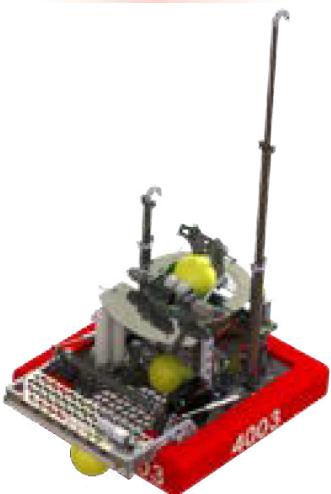
- Industrial Design Award
- District Event Winner

West Michigan District Event

- Quality Award
- District Event Winner

Michigan State Championship Consumers Energy Division

- District Event Semifinalist
- FIRST Championship Houston (Worlds) Turing Division
- Subdivision Quarterfinalist



## 2021 - Infinite Recharge (At home)

At home challenge

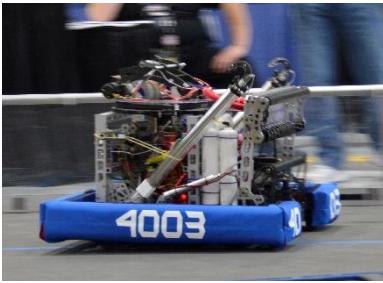
Virtual Competitions against teams from around the country and world

- Excellence in Engineering award
- Competed with video submissions and time trials
- Modified the 2020 robot to compete as needed for the skill challenges.



### Game design challenge

- Team members created a new FRC game design and submitted a description of the game, rules, and point structure.



## 2020 - Infinite Recharge

Saint Joseph District Event

- District event Semi-Finalist

Covid ended the season prematurely





## 2019 - Deep Space

Saint Joseph District Event  
• Engineering innovation award  
• District event Finalist  
West Michigan District Event  
• Autonomous Award  
• District Event Semifinalist  
Michigan State Championship – Ford Division  
• Division Quarterfinalist  
FIRST Championship Detroit (Worlds)  
Daly Division  
• Subdivision Winning Alliance



## 2018 – FIRST Power Up

Kettering #2 District Event  
• Ranked 1st in Qualifying  
• District Event Winner  
• Innovation in Controls Award  
West Michigan District Event  
• Ranked 7th in Qualifying  
• District Event Winner  
• District Chairman's Award Winner  
Michigan State Championship – Ford Division  
• Ranked 3rd in Qualifying  
• Division Winning Alliance State Championship Winning Alliance  
FIRST Championship Detroit (Worlds) – Archimedes Subdivision  
• Ranked 4th in Qualifying  
• Subdivision Winning Alliance  
• Autonomous Award



## 2017 – FIRST Steamworks

Lakeview District Event  
• District Event Winner  
• Innovation in Controls Award  
West Michigan District Event  
• District Event Finalist  
• Quality Award  
Michigan State Championship - DTE Energy division  
• Division Quarterfinalists  
• Innovation in Control  
World Championship  
Carson Subdivision  
• Quarterfinalists





## 2016 – FIRST Stronghold

Waterford District Event

- District Event Finalists
- Innovation in Controls Award

West Michigan District Event

- Quarterfinalists
- Innovation in Control

Michigan State

Championship

- Semi-finalists
- Innovation in Controls Award
- Excellence in Engineering Award



## 2015 – Recycle Rush

Howell District Event

- Creativity Award
- District Event Finalist

West Michigan District Event

- Semifinalists
- Judges' Award

Michigan State

Championship

- Quarterfinalists
- World Championship – Tesla Subdivision

- Subdivision Quarterfinalists



## 2014 – Aerial Assist

Gull Lake District Event

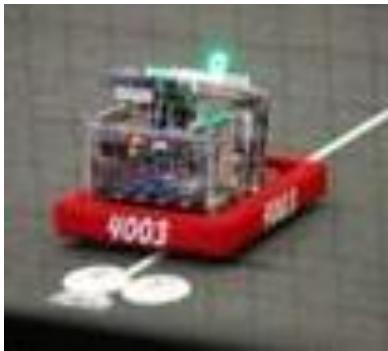
- District Finalists
- West Michigan District Event

- Quarter Finalists

Michigan State

Championships





### **2013 – Ultimate Ascent**

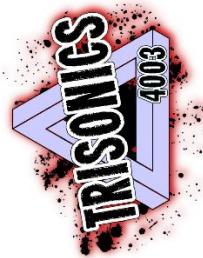
Traverse City District Event  
• Quarter Finalists  
West Michigan District Event  
• District Finalists  
• Team Spirit Award



### **2012 – Rebound Rumble**

Traverse City District Event  
• Rookie All Star  
• Highest Rookie Seed  
• District Event Winners  
West Michigan District Event  
• Quarter Finalists  
Michigan State  
Championship





#### Mechanical Facts

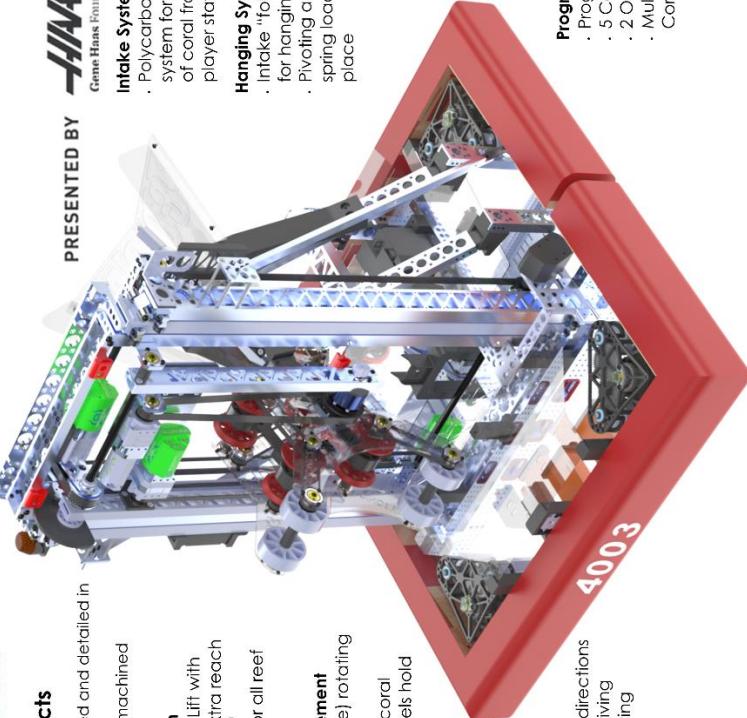
- Entire robot modeled and detailed in Solidworks
- Robot fully custom machined

**Cascade Lift System**

- 3-Stage Cascade Lift with rotating arm for extra reach
- Extends up to 101"
- Pre-Set positions for all reef levels

**Coral / Algae Placement**

- 360 degree (infinite) rotating end-effector
- Inner wheels hold coral
- Outer spread wheels hold the algae



#### 2025 Season

- 32 Team Members
- Competitions
  - Mt. Pleasant District Event
  - Ranked 4th in Qualifications
  - Selected onto the #2 Alliance District Event Finalist
  - Excellence in Engineering Award
- West Michigan District Event
  - Ranked 23 in Qualifications
  - Selected onto the #7 Alliance
  - Quality Award
- Michigan State Championship
  - DTE Energy Foundation Division
  - Ranked 29th in Qualifications
  - Excellence in Engineering Award

#### Programming

- Programmed using Python
- 5 Cameras for Vision Control
- 2 Orange Pi's for Vision Processing
- Multiple Autonomous Modes for Coral and Algae placement

#### Swerve drive

Allows motion in all directions

- Robot Oriented Driving
- Field Oriented Driving



Design Website showing robot design tools and process created by the Design Team Students