

Agenda

- Welcome
- Introducing FIRST
- Novi Community Schools District - Robotics Overview
- Black Frog Robotics - Novi FTC Team 6134
- Q&A
- Robot Demo





For Inspiration and Recognition of Science and Technology

<https://firstininspires.org>



About FIRST

- FIRST is a world leading youth-serving global organization founded in 1989 by inventor Dean Kamen.
- Organization that prepares young people for the future through a suite of inclusive, team-based robotics programs for ages 4-18 (Kindergarten to 12th Standard) and advancing STEM education



PURPOSE: *FIRST* exists to prepare the young people of today for the world of tomorrow.

VISION: To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.

MISSION: is to provide life-changing robotics programs that give young people the skills, confidence, and resilience to build a better world.



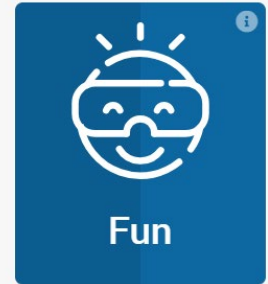
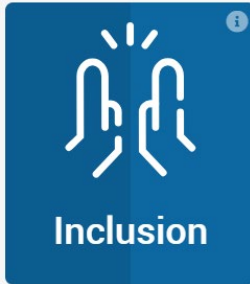
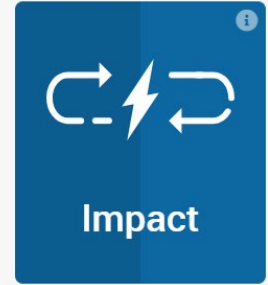
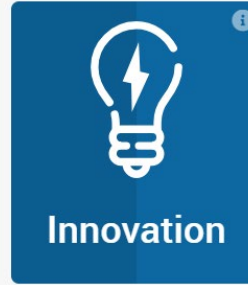
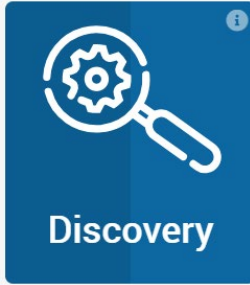
FIRST: Core Values

Gracious Professionalism®

Gracious Professionalism is part of the ethos of *FIRST*. It's a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

Coopertition®

Coopertition fosters innovation by promoting unqualified kindness and respect in the face of intense competition.

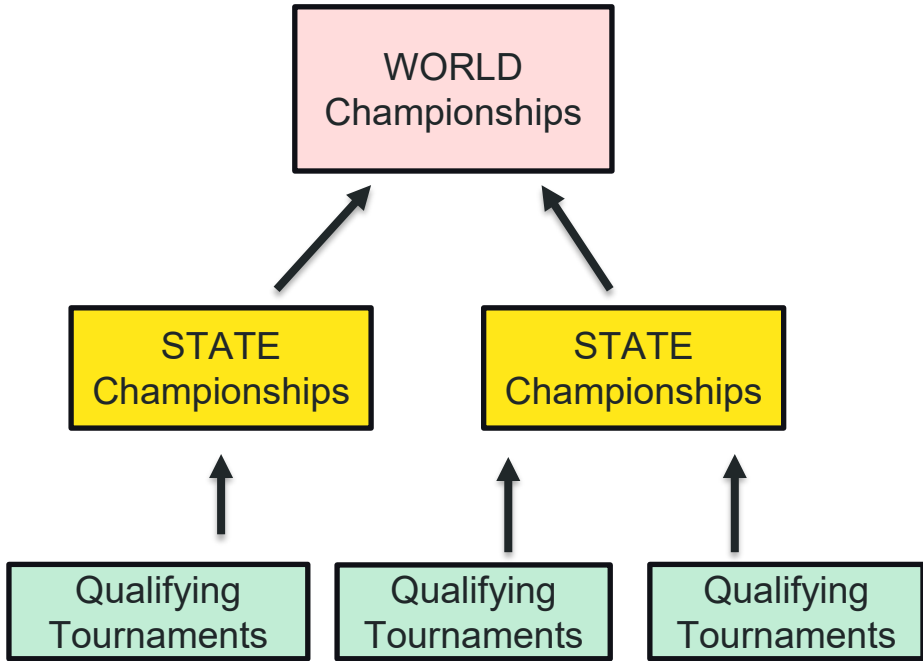


FIRST Programs

- FIRST programs emphasize not only technical skills but also important life skills such as teamwork, communication, critical thinking, and leadership.
- They aim to inspire young people to pursue STEM careers and become the innovators and problem-solvers of tomorrow



More detail about FIRST Tech Challenge – Middle school



FIRST Dean's List

Inspire Award

Think Award

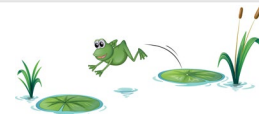
Connect Award

Innovate Award sponsored by RTX

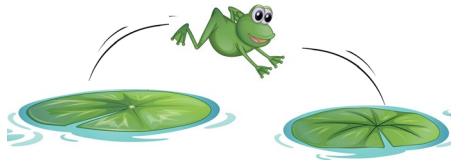
Design Award

Motivate Award

Control Award



Our Team



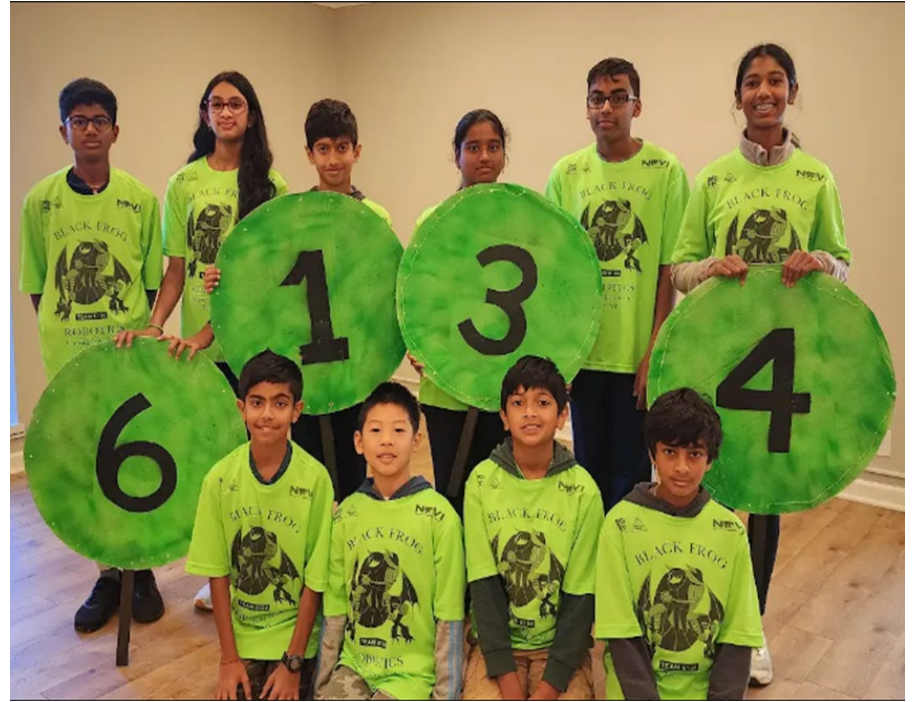
Our Team

Members - 10 students (Grades 6-8)

- Coach
- Parents
- Mentors
- Sponsors

Team was established in 2011 and has an impressive history.

1. First FTC team in the City of Novi
2. Has advanced to Worlds 7 times
3. Has won Inspire award 12 times



2023-24 Black Frogs Team



Team # 6134 - Black Frog Robotics - Awards

Year	Event	Award(s)
2024	Lake Orion FTC Qualifier	<ul style="list-style-type: none">• Inspire Award 2nd Place
	Bedford FTC Qualifier	<ul style="list-style-type: none">• Connect Award 2nd Place• Think Award
2023	MI Hartland FTC Qualifier	<ul style="list-style-type: none">• Inspire Award 3rd Place• Think Award• Winning Alliance - 2nd Team Selected
	Michigan FTC State Championship-SE - Woodie Flowe...	
	Michigan FTC State Championship-SE	<ul style="list-style-type: none">• Connect Award
2022	MI Freeland FTC Qualifier	
	MI Lake Orion FTC Qualifier	<ul style="list-style-type: none">• Motivate Award 2nd Place• Think Award
	MI Grosse Pte. Woods FTC Qualifier	<ul style="list-style-type: none">• Inspire Award 3rd Place• Think Award
	Michigan FTC State Championship-SE	<ul style="list-style-type: none">• Connect Award



Timeline

Team Registration - Join a team!

First team meetings, outreach events, & community services.

Season's Game Reveal!

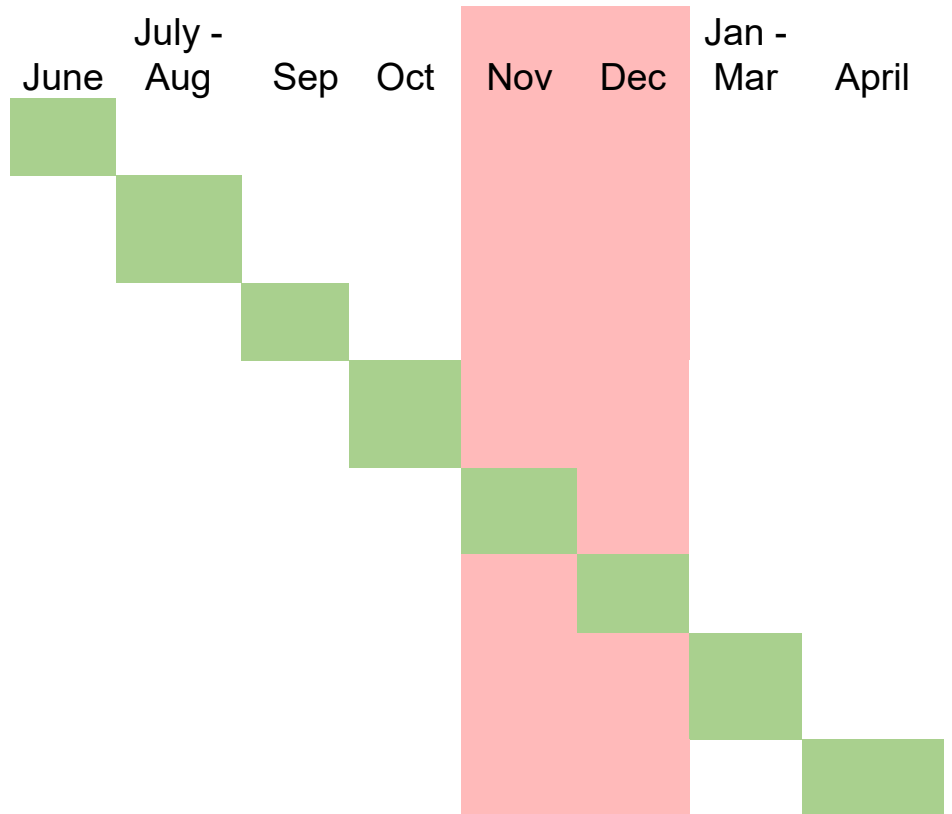
Building robot, team training, CAD , Programming, Documenting.

Qualifiers

States (Mission: Get chosen for World)

Preparation for Worlds - Drive practice, outreach events.

WORLDS!!! End of season.



Gracious Professionalism

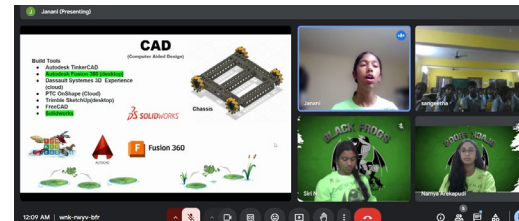
Our Coaches emphasize the following values:

- Respect for each other
- Being Humble and compassionate
- Treating others as you would like them to treat you
- Help each other and learn together
- Sharing ideas and being inclusive
- Encourage teammates
- Work Hard



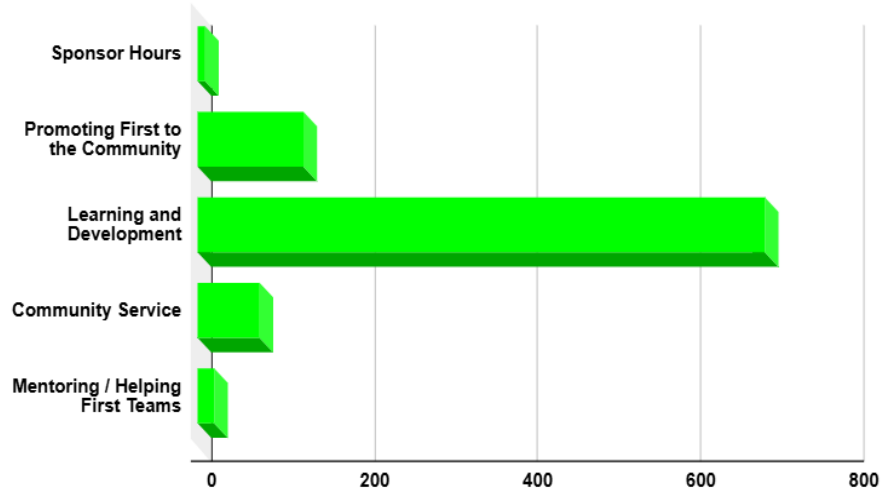
Our Team displayed Gracious Professionalism by:

- Working with FIRST FLL teams to share our ideas to help them with their project
- Our Novi FRC team generously guided us in programming and 3D printing
- Sharing knowledge with FTC teams in India and Romania
- Attending the Novi Public Library with our fellow FIRST teams.

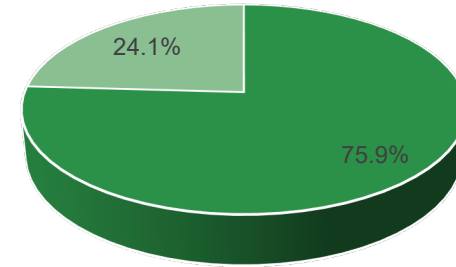


Outreach Events

Outreach Summary Till Nov 16th 2024



Total Outreach Events - 52
Number of Hours - 928



■ Technical ■ Non-Technical



Non-Technical Programs

- Pink Out
- Jack O Lantern Jubilee
- Pumpkin Fest
- Trunk or Treat
- Outreach to middle schoolers in India
- Village Oaks Feed the Need
- City of Novi Superhero Showcase
- Willow Brook Farms Community Gathering



Community Service

- **Bountiful harvest:** Assisted by packing food and organizing grocery shelves, shopping and delivering groceries at curbside.
- **Hanuman Temple:** Cleaned and organized their kitchens and assisted with serving food to the visitors.
- Participated in **Toys for Tots** and **Mitten for Detroit** for the upcoming season.
- Thank you to our favorite super heroes, **The Novi Fire Fighters** and **The Novi Police Department** with gifts



SRI BAKTHA HANUMAN TEMPLE



Connecting with Professionals

- Lawrence Tech University and Kettering University
- Program training from Black Frog Alumni and NOVI Frog Force 503 FRC team
- CAD- Solidworks training sessions from Matt Bednarski, Mahesh & PID, Control feedback from Dr.Harsh
- Meeting STEM Professionals Abigail Overbeck & Elena Shrestha
- Hands on training at Ramayah Auto Garage



Stem Equity – Women in Robotics

Elena Shrestha - AI Robotics Researcher at University of Michigan

Elena is a Postdoctoral Fellow with the Robotics Department at U-M since August 2022. Her research interest is in developing autonomous unmanned vehicles that are capable of intelligent planning and decision-making.

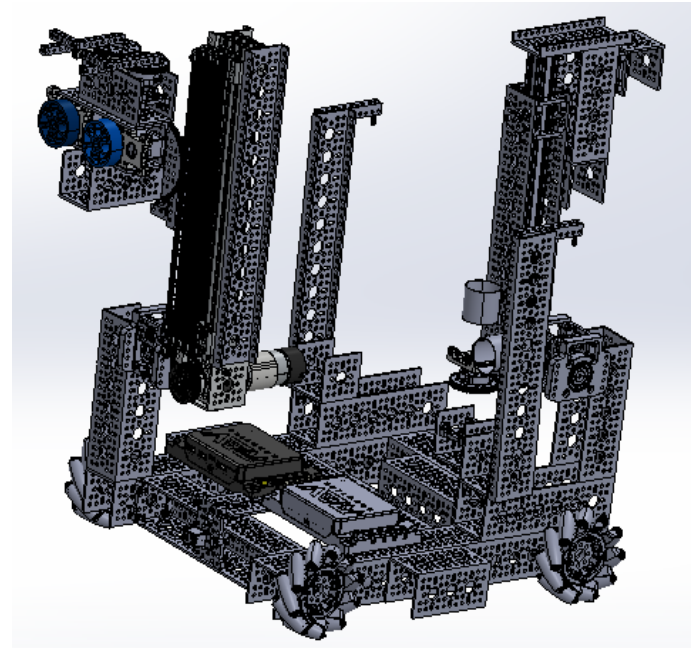
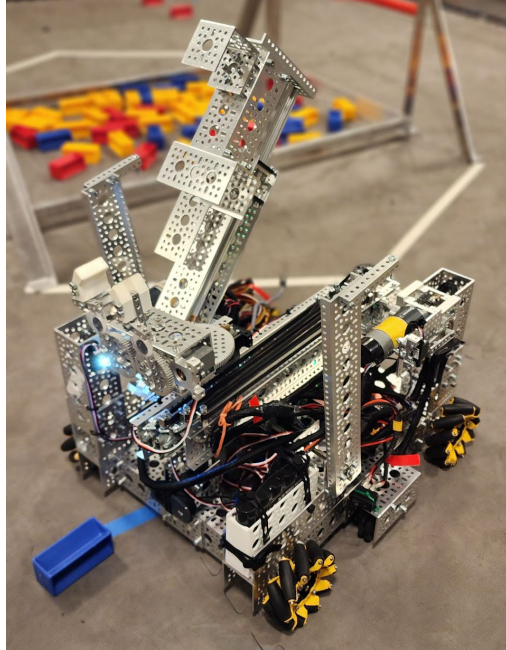


Abigail Overbeck – R&D Paint Process Engineer at FANUC

Abigail joined FANUC after completing a Masters in Mechanical Engineering with a concentration in Mechatronics. She enjoyed working on the control of robotic arms, computer vision and kinematics.



Meet DWARAKA



MIDDLE SCHOOL PROGRAM

FIRST TECH CHALLENGE

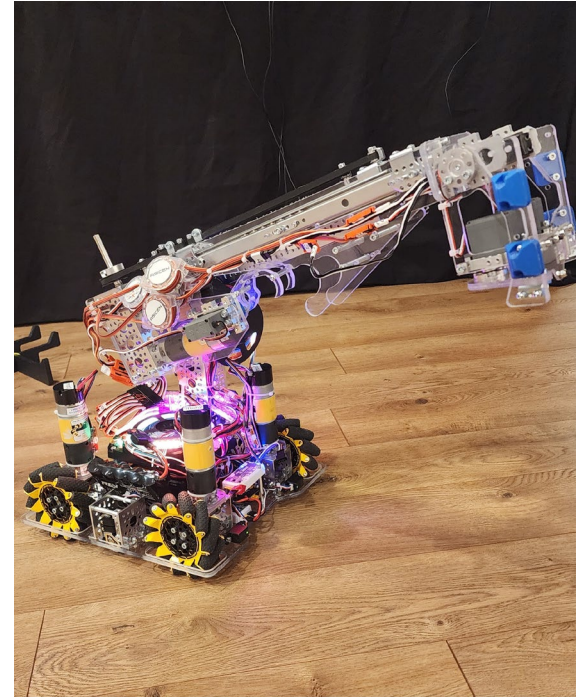


PRESENTED BY  **RTX**

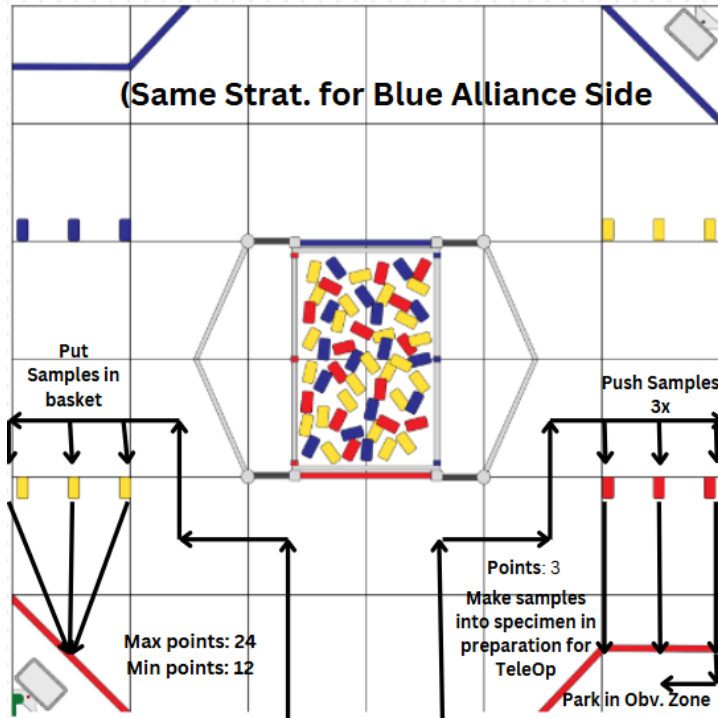


Our Team Goals:

- To design and build a competitive robot
- To promote FIRST while upholding the FIRST core values
- To help those in need through community service
- To engage with our sponsors
- To develop student leadership
- To extend our knowledge of STEM and to share our knowledge with others
- To understand real world STEM applications
- To make a positive impact in our community



Game Strategy



Autonomous Strategy

Hang specimen on the high chamber

Park the robot in the ascent zone

Tele-op

Pick up sample(s) from submersible

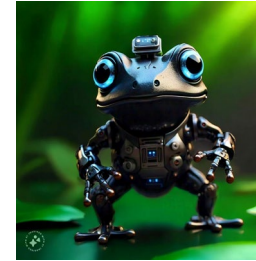
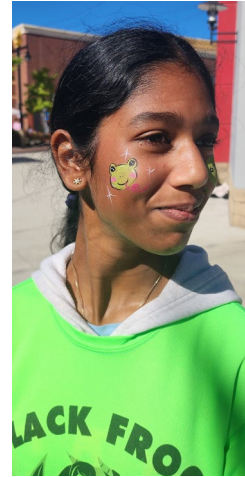
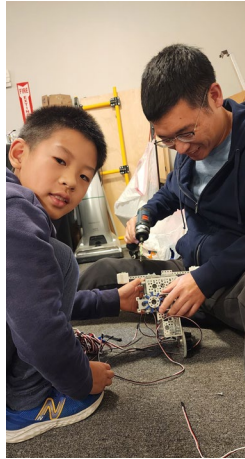
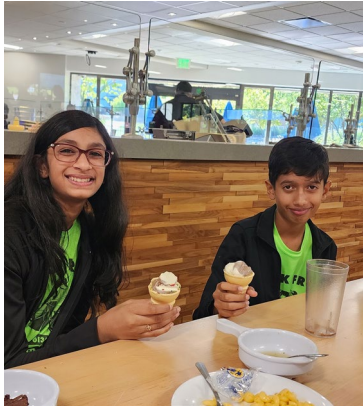
Take to human player and hang them in the high basket

End Game

Hang a level 2 ascent



Beyond the Robots



Black Frog 6134

Thank You to our Sponsors



BOSCH



SRI BAKTHA HANUMAN TEMPLE



DTE Energy Foundation



Thank You!

Any Questions?

Thank you very much for giving us this opportunity to present to you.

