

Student Built, Professionally Inspired,
Community Driven

Sponsorship 2019-20

4381



Twisted Devils

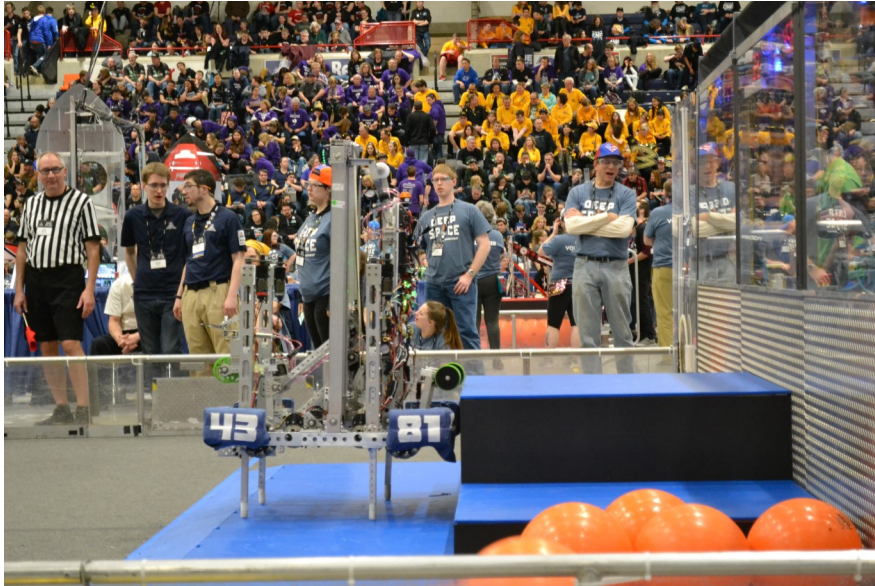
Welcome to Team 4381

Hello! We are FRC Team #4381, a competitive robotics team from the Gull Lake Area in Kalamazoo, Michigan. We compete in local, statewide, regional, and world level tournaments, competing alongside hundreds of teams from across the globe to inspire and increase education and awareness of STEAM (Science, Technology, Engineering, Arts, Mathematics) careers. We invite you to look through our packet and learn more about what we do and how we try to inspire our community and live out our motto, "Student Built, Professionally Inspired, Community Driven".



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Story Of FIRST

FIRST (For Inspiration and Recognition of Science and Technology) is a non-profit organization founded by Dean Kamen in 1989 to promote science and technology to high school students. The robotics competition centers around a game that changes each year. Teams have six weeks to design, build, and program a robot to compete in this game, whilst staying within the given rules and guidelines for that season.

Currently, *FIRST* consist of over 67,000 teams from across the world: The USA, Canada, UK, Taiwan, Japan, Brazil, Israel, and more. Over 3,600 competitions worldwide lead up to the world-wide competition, now held in Detroit and Houston. Not only does *FIRST* provide an excellent real world experience for students, it also presents many opportunities for scholarships. Each year more than \$80 million dollars in scholarship value are given to *FIRST* students from a broad range of colleges and universities .

FIRST provides an education and view for a career path for young people who might not have otherwise discovered an interest in STEAM fields. The organization works closely with schools and community based groups at every level to transform both the perception and reality of education in science and technology. *FIRST* provides a “hands-on” learning experience, emphasizing teamwork, coordination, integration and professionalism, which leads to students being ready to function in today’s workplace.

FIRST Statistics

-*FIRST* participants are 2 times as likely to major in science or engineering as non participants.

-33% of women in *FIRST* programs major in engineering.

-88% of FRC Students are more interested in doing well in school than their non-*FIRST* peers.

-91% of FRC participants plan to go to college.

-90% of FRC Participants plan to take an advanced STEAM class.

-Over 75% of *FIRST* alumni are in a STEAM field as a student or professional.

-More than 90% of students say that they improved their communication and teamwork skills through their participation in *FIRST*.

-73% of students felt more comfortable presenting their ideas in front of new people.

Gull Lake Area Robotics (GLAR)



Team 4381 Twisted Devils is supported by Gull Lake Area Robotics (GLAR), a state and federally registered non-profit organization. The Gull Lake area includes Richland, Hickory Corners, Ross Township, Bedford, Augusta, Galesburg, Delton, and Comstock. GLAR's sole purpose is to provide financial, educational, and logistic support to the student members of Team 4381 and our Middle School FTC and Elementary FLL and FLL Jr. Teams. GLAR operates via a set of by-laws and a student handbook which outlines the responsibilities and expectations for student members, mentors, and associate

members. Although based within the Gull Lake Community School District, Team 4381 receives limited financial support from the district. The executive board and mentors are not compensated for their work with students, and membership is completely voluntary. Our non-profit status allows us to more effectively raise the funds needed to provide a quality program for our students. Our mentors come from a diverse range of backgrounds including science, engineering, trades, marketing, and finance, providing a rich source of experience for our students.

"This past year we expanded our student base, more than tripling from our rookie year in 2012"

Alumni Statistics

Our program is one that truly supports and inspires the success of our students. All 55 of our students who were seniors have graduated, 44 of them going to a university, and 34 are in STEAM fields. Our Alumni attend some of the finest colleges and universities in the region such as Michigan, Michigan Tech, WVU, WMU and Kalamazoo College.

About Us

We are Team 4381, the Twisted Devils, from Gull Lake High School in Richland, Michigan. This is our 9th year as an FRC Robotics team and we are looking forward to hosting our 8th District Competition, held at Gull Lake High School. We are very fortunate to have this opportunity available to us and thank FIRST Robotics for it. Our team is open to membership to any student in Richland and surrounding communities.

- ◆ 2012—Our first event, a great learning experience, we hosted the Gull Lake district competition.
- ◆ 2013—Competed in the Michigan State Finals and finished in the Top 10 in both district competitions.
- ◆ 2014—Saw a huge increase in team participation, with over 3 times as many members vs. our rookie year.
- ◆ 2015—Our team advanced all the way to the World Finals competition in St. Louis, Missouri. We placed 2nd in the Kentwood District competition, and earned a 1st place victory at the Gull Lake District competition.
- ◆ 2016— Highlighted by many awards for our Safety program and Gracious Professionalism. We advanced to the Michigan State Finals, narrowly missing an invitation to Worlds!
- ◆ 2017— Participated in three district competitions and advanced to the Michigan State Finals. We received awards for our Safety program, as well as awards for Entrepreneurship, Engineering Inspiration and Imagery.
- ◆ 2018—Won our first Chairman's Award and competed in the Michigan State Finals. We also won the Safety Award and the Judge's Award. This is the first year that our team constructed two robots, one for training and one for competition. Over the summer, we built a robotics facility for all of the GLAR teams to practice in.
- ◆ 2019— We won the Entrepreneurship, Innovation in Control, Safety, and Gracious Professionalism Awards. We advanced to the State competition, where we beat the reigning World's champion in the quarterfinals, and went to World's ourselves.



What do we do– In short

The Gull Lake Twisted Devils, Team 4381, are a Gull Lake Area Robotics (GLAR) Team, a Participant in FIRST Robotics. We promote the values of science, technology, engineering, arts, and mathematics in our community. We provide real life education in these areas:

- ◆ Marketing
- ◆ Web design
- ◆ Journalism
- ◆ Public speaking
- ◆ Data Analysis
- ◆ Problem Solving Skills
- ◆ Control Electronics
- ◆ Programming
- ◆ Electrical Power Systems
- ◆ Mechanical Design
- ◆ Mechanical Construction

“Student Built, Professionally Inspired, Community Driven”

How We Work, How We Live

The phrase “Student Built, Professionally Inspired, Community Driven” is more than just a slogan or a tagline, it is our way of working and our way of living. “Student Built” pertains not only to our robots, which are fabricated, assembled, wired, and programmed by our students, but also to our team. Everything we do is driven by our students, whether it be in competition or outside activities. “Professionally Inspired”-our team is blessed with a large core of mentors from a broad range of trades, professions, and background who freely give of their time, thousands of hours per year. Our students learn, experience and gain valuable wisdom from working with them. In the words of one of our alumni, *“Through participating on the robotics team, I know what is expected of a professional and I think I’m more mature than most people my age because of it.”* “Community Driven”- Gull Lake is a small community, and we strive to impact our area through education, example and service. Our team goes beyond “building robots” and strives to promote STEAM Education at all levels in our schools and volunteering in such areas as Habitat for Humanity, Relay for Life, County Fairs, Museum Presentations, Highway Clean-up, local 5K runs, and Science Weekends. In the fall of 2019, our high school team contributed over 1,000 volunteer hours with our 8 FLL Jr., 8 FLL, and 4 FTC teams.

High Level competition requires a great deal of funding. Team 4381 achieves this with a budget only 1/3 that of many teams in Michigan with similar achievements!

This is one of our 2019 drive teams competing at the World's competition in Detroit.



Our Budget

Competition Fees	Typical Cost	Running Total
-Two In-State District Events	\$5,000.00	\$5,000.00
-State Championship	\$4,000.00	\$9,000.00
-World Championship	\$5,000.00	\$14,000.00
Raw Materials and Tools		
-Robot Parts and Materials	\$10,000.00	\$24,000.00
-Materials for Practice Field	\$500.00	\$24,500.00
-Tools for Construction	\$1500.00	\$26,000.00
Marketing & Shipping		
-Shipping Expenses-Crate	\$500.00	\$26,500.00
-Team Uniforms	\$500.00	\$27,000.00
-Marketing Items	\$1000.00	\$28,000.00
Travel Expenses		
-District and State Championships	\$2,000.00	\$30,000.00
-World Championship Events	\$5,000.00	<u>\$35,000.00</u>

Why Team 4381?



Of all the different programs and charities asking for donations, why should you choose team 4381? We believe the answers can be found in the mission of FIRST and our team. Our main goal is to increase and encourage the STEAM fields. Sadly, US students rank 15th globally in math and science scores. Support of FIRST FRC Team 4381 will improve the future of our students and our community. 2-8 years down the road, our students will be the employees of our community's workplaces, and perhaps starting their own companies. Robotics can be thought of as the "Varsity Sport of the Mind". It educates our community about Science, Technology, Engineering, Arts, and Mathematic fields. Not only does robotics educate students about STEAM, but also gives them opportunities

our schools simply cannot provide. Approximately 50 million dollars in scholarships are available to FIRST participants, making it easier for those from less fortunate situations to be successful in their future.

While there are several FRC teams in the area, The Twisted Devils is one of the newest and fastest growing. Within our nine years as a team, we have been to the State Finals six times, and the World Finals twice. With sub-teams such as CAD, strategy, programming, marketing, electrical, and mechanical, our talented mentors donate lots of their time--over 30,000 hours— to help our team succeed.

We hope you consider Team 4381. Thank you!

"[Robotics] has given me tons of soft skills like : Working with hand tools, machines, and how to properly use tools and power tools." -A student, Alumni of Team 4381

Levels of Sponsorship

Contributor- Up to \$249: Company name on website

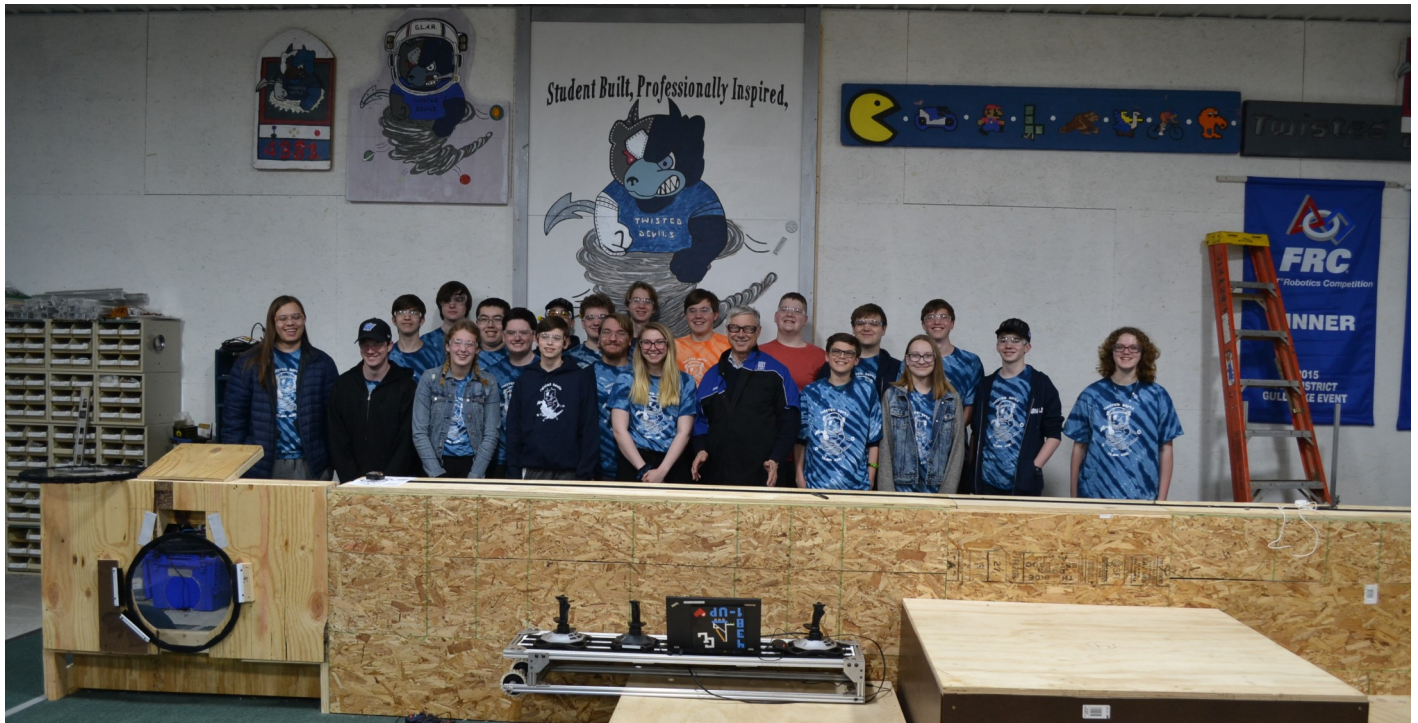
Bronze- \$250-\$499: All above and Name on Team Shirt

Silver- \$500-\$2499: All above and logo on shirt, Sponsor Spotlight on website, name on robot

Gold- \$2500-\$4999: All above and name on pit structure, event shout-out at Gull Lake.

Platinum- \$5000-\$9999: All above and Presenting Sponsor Status

Diamond- \$10,000+: All above for all GLAR FRC, FTC and FLL Teams



Our team strives to be involved at a the national level, we invited Michigan representative Fred Upton to our build facility to further his knowledge of STEAM, robotics, and Team 4381.

Sponsorship

Please consider helping us by choosing your donation level below: (please specify)

- Contributor- Up to \$249:
- Bronze- \$250-\$499:
- Silver- \$500-\$2499:
- Gold- \$2500-\$4999:
- Platinum- \$5000-\$9999:
- Diamond- \$10,000+:

Company:

Contact Name:

Address:

Telephone: () _____ - _____

E-Mail:

An acknowledgement letter for your tax deductible donation will be mailed.

FIRST is Committed to Diversity and Inclusion

[Have a skill ?](#)

[Enjoy working with youth ?](#)

[Have some time ?](#)

[Want to make a difference?](#)

Volunteers make up 99% of the FIRST® workforce. Whether you have a weekend to help, want to mentor a team, have technical or non-technical expertise, there is a volunteer role suited to your unique interest. Find information about FIRST programs, volunteer resources, opportunities, and more!

<http://www.firstinspires.org/ways-to-help/volunteer/event-volunteers>

Building STEAM literacy and confidence is required to be successful in nearly every endeavor in today's technology-rich society. STEAM competence and confidence creates pathways to well-paying jobs and entrepreneurial opportunities in the fastest-growing fields, creating the potential for young people to achieve purposeful and prosperous lives.

Collectively, we must enable our young people to grow up to solve the world's most pressing problems, be strong citizens, and build a brighter future. *FIRST* is committed to bringing its programs to students who would benefit most, and is actively engaged in developing strategies that will ensure greater access to its programs and reduce inequalities. *FIRST* is committed to fostering, cultivating and preserving a culture of diversity and inclusion. We embrace and encourage differences in race, ethnicity, national origin, sex, gender, gender identity, gender expression, disability, age, religion, income or any other characteristics that make our adult-force and students unique.

Exploring, developing and implementing strategies to become more inclusive and ensure access to our programs to all students (as well as access to key supports) is critical for *FIRST* to reach its goal and mission. ALL young people should have the opportunity to become science and technology leaders. *FIRST* will remove barriers to program participation for underserved, underrepresented students. Pursuant to that end, *FIRST* Diversity & Inclusion is a concerted, organized effort to develop strategies to make its programs more accessible and inclusive.

Gull Lake Area Robotics

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