

NORTHVIEW

TECHNO TITANS ROBOTICS FOUNDATION, INC

501(C)(3) NON-PROFIT ORGANIZATION




**FIRST.
ROBOTICS
COMPETITION**
**CHAIRMAN'S
AWARD**



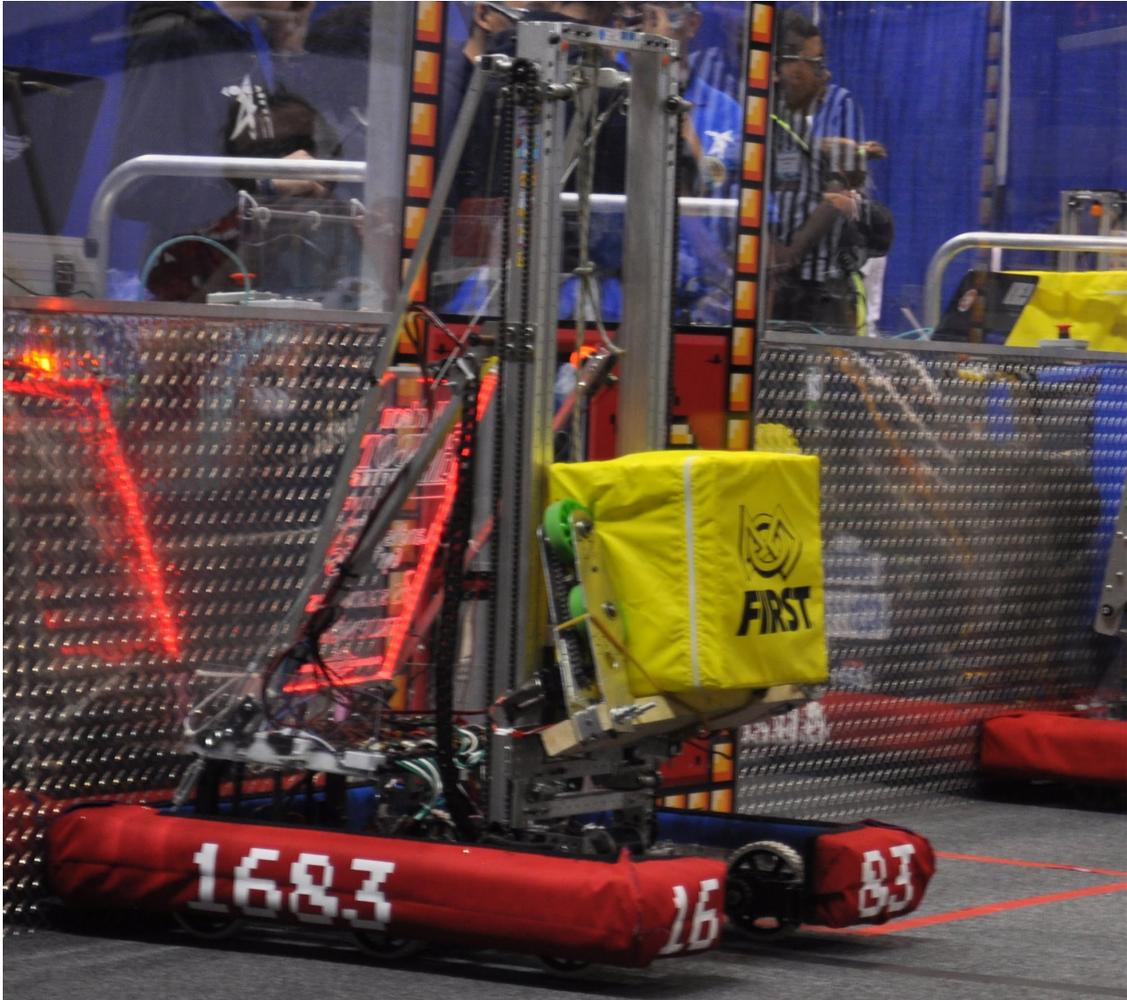
**SPONSORSHIP
PACKET
2018-2019**

2018
PEACHTREE DISTRICT
ALBANY EVENT



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ABOUT OUR TEAM

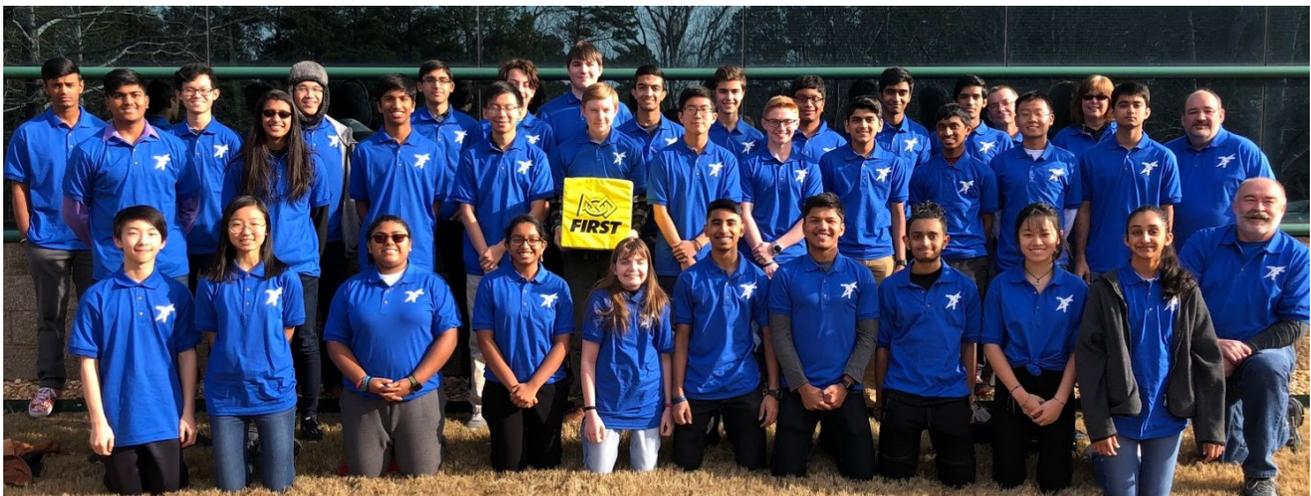
Northview Techno Titans Robotics Foundation Inc. is a 501(c)(3) non-profit organization which supports the Techno Titans robotics team from Northview High School in Johns Creek, Georgia. Every year, we participate in the *FIRST*® (For Inspiration and Recognition of Science and Technology) Robotics Competition (FRC) and travel to compete at events run by *FIRST*®. Initially, our team started as a school club in 2005. Facing a lack of resources and an inability to continue as a club, we grew into a non-profit organization, increasing our potential as a team tremendously. We now impact our community through various educational programs and demonstrations for students passionate about STEAM (Science, Technology, Engineering, Art, and Mathematics).

MISSION

"Leadership, Learning, Community"

Our mission is to prepare students for careers in STEM, instill a strong foundation for success in any future endeavors, encourage collaboration and teamwork, and actively mentor students and point them in the right direction as they work through designing and building robots.

The mission of *FIRST*® is to inspire young people to be science and technology leaders and innovators, 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.



SUBTEAMS

PROGRAMMING

The robot is just a block of metal and wire until the programming team codes in the robot's movements. Some skills that the programming team uses are:

- Java for the main code
- Python for vision code
- Mobile app development
- Using Raspberry Pi's

ELECTRICAL

Electrical is the subteam that wires the robot together. The electrical team works on:

- Wiring the robot
- Power regulation
- Pneumatics
- Sensors (ultrasonic, gyroscope, potentiometers, etc.)



DESIGN & FABRICATION

The design team uses a computer aided design (CAD) software to blueprint the robot, and the fabrication team brings the blueprints to life with metal and power tools. These are some of the tasks that the mechanical team does:

- Building the robot
- CAD
- Visual representations of the robot
- Working with power tools

BUSINESS

There are also a lot of jobs that don't require technical engineering skills. The business team is responsible for:

- Mobile application development
- Design, branding, and merchandise
- Social media
- Managing the website
- Creating videos about our team and our robot
- Obtaining and keeping sponsorships
- Applying for awards/grants

MAJOR ACHIEVEMENTS

FRC

- Chairman's Award: 2018
- State Quarterfinals: 2017
- Columbus District Qualifier Quarter Finals: 2017
- Gainesville District Qualifier Quarter Finals: 2017
- Winner of Peachtree Regional: 2010, 2014
- Winner of Bayou Regional: 2007
- Finalist of Peachtree Regional: 2006, 2008, 2013
- Innovation in Control Award: 2011
- Creativity Award: 2010
- Woodie Flowers Award: 2014, won by former mentor Richard Sims
- Winner of GRITS (off-season state competition): 2013

BEST

- Winner of Georgia BEST: 2004, 2006, 2007, 2013, 2014
- Winner of Georgia BEST Award: 2014

OTHER NOTABLE MENTIONS

- Featured in Northview Messenger of "Excellence of Women in STEM"
- Northview High School Volunteer (Mentor) of the year: 2016, 2018



PROJECTS & ACTIVITIES

SUMMER CAMP

Every year varsity robotics team members host a summer camp open to rising 4th to rising 9th graders. During the summer camp, children develop their understanding about STEM related subjects through projects. While working on these projects, kids develop various skills as well as learn how to function as a team and become better teammates themselves in the future.

FALL BOOT CAMP

Students interested in robotics are exposed to the four subteams: Mechanical, Electrical, Business, or Programming. Students are then taught the fundamentals of their subteam through a two week long boot camp. Through critical thinking and creative problem solving, their skills are put to the test by being assigned projects.

MOBILE GAME

We develop a game for mobile devices themed around the *FIRST*® competition every year. Last season, our team created “Titan PowerUp” which was based on the *FIRST*® Power Up competition. Available on both iOS and Android devices, our game was advertised at competitions and other *FIRST*® events as an exciting game for robotics and non-robotics members to play. Developing a game every year has become a Techno Titan tradition that helps spread STEM in the community.



FIRST® COMPETITION

Every *FIRST*® season we design, build, wire, and program a robot to take to competition. Although there is a different specific task to accomplish for every competition, robots generally have to be capable of collecting and moving objects around, climbing up somehow, and moving autonomously. Robots weigh 120 pounds and must be built within 6 weeks.



KRONOS - TSHIRT BOT

Over the past few years, we have built a T-shirt shooting robot. Kronos has spread STEM to over 25,000 people so far in fun and exciting ways. Kronos is sent to various community events to advertise STEM in fun and exciting ways the hopes of exposing people to the capabilities of our program.

COMMUNITY SERVICE

In order to propagate STEM in our community, we participate in local events and mentor other teams including *FIRST*® Lego League (FLL) teams through outreach programs.

MENTORSHIP

In addition to our own team, we have supported numerous robotics and FLL teams through our outreach programs. Some of the teams we've helped include:

- Johns Creek High School Gladiator Robotics - Shared our mentors, supplies, workspace, and aided them in completing their registration in 2014 to help them start their team. Through mutual effort and collaboration, the Gladiators went on to win the 2015 Peachtree Judges Award.
- FLL Teams - We mentor and give demonstrations to nine FLL teams, including Shakerag TechnoSharks & RoboSharks, Findley Oaks RoboEagles, Youth Technology Learning Center RoboElite, and Techno Wizards.
- In total, we serve more than 250 students across all grade levels.

LOCAL EVENTS

To promote STEM and robotics in our community, we go to schools, companies, carnivals, and other events to give demonstrations. We share our experiences and robots with elementary, middle, and high school students to inspire them in pursuing STEM. We also talk to companies to connect current and future sponsors with STEM education, and public events to expose a diverse audience to the idea of robotics. Our team showcases our robots at school and other community events including open-houses, awareness walks, and festivals.



SUPPORTING THE TECHNO TITANS

WAYS TO SUPPORT OUR TEAM

- **Financial** - Money goes toward robot construction, competition fees, outreach, prototyping, and competition travel.
- **Mentorship** - Allows students to interact with professionals and learn from them throughout the season. Provides the promotion of STEM to everyone on the team by attending team meetings and build sessions.
- **In-kind donations** - Include services such as machining or parts donation. Donations are key to manufacturing the robot.
- *Any combination of the above categories or any type of support and/or amount of sponsorship is much appreciated.*



SPONSORSHIP BENEFITS

Sponsorships are not one-way affairs; the Techno Titans return the favor.

Benefits of sponsoring the team include:

- Increased brand recognition. Robotics is similar to Formula 1, NASCAR, or any other auto racing. The team proudly recognizes its sponsors on the robot, the official team name, and team apparel.
- It is an investment in the future, as our team trains potential employees.
- It is tax deductible.



SPONSORSHIP TIERS

Since we are a non-profit organization, we value help in any way, shape, or form from our sponsors. This can be done through money, but it does not have to be illustrated in monetary value. This can be shown through any form of support such as mentorship. In fact, if a mentor is provided, you are already a gold level sponsor.

BRONZE

For donations between \$500 and \$999: company logo on handbook, brochure, and website

SILVER

For donations between \$1000 and \$1499: all benefits of Bronze plus company logo displayed in pits during competitions

GOLD

For donations \$1500 - \$2999: all benefits of Silver plus company logo on t-shirt

DIAMOND

For donations \$3000+: all benefits of Gold plus company logo displayed on robot

CONTACT

As the Techno Titans, we strongly believe that communication is key to building and improving our sponsor-team relationship. For any questions or concerns regarding our sponsorship details, please feel free to contact us.

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