

"What is FEAR?"

A Story Guide

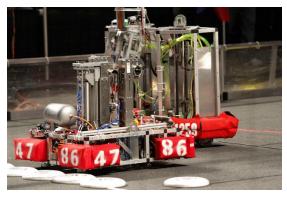


Competitions:

• Wisconsin Regional (Milwaukee, WI) - Rank 56







FEAR 1.0 - 2013

2013 was Nicolet FEAR's rookie year. Fully supported by Nicolet High School from the beginning, four teacher mentors started the team with 37 active student members. Despite it being Team 4786's first experience with *FIRST*, many of the original team members had participated in BOTS IQ, a "Battle Bots" style competition, through the engineering courses offered at Nicolet in prior years.

Nicolet FEAR jumped right into build season without any preseason. The team went on to realize the importance of a preseason, which would be implemented for FEAR 2.0. During build season, Nicolet FEAR held meetings four to five days a week. During the build season, the team built five robots: one initial robot, two that were practice drive bases, and two identical competition robots.

Nicolet FEAR finished the Wisconsin Regional at rank 56, making Ultimate Ascent a humbling experience for Team 4786. Nicolet FEAR was ready to launch into year two with new energy and appreciation for the lesson learned: the faster you fail, the faster you will reach success.



Competitions:

- Central Illinois Regional (Pekin, IL) Rank 27
- Wisconsin Regional (Milwaukee, WI) Rank 40 Awards:
 - FIRST Dean's List Finalist (Wisconsin) Chris Welker





FEAR 2.0 - 2014

Keeping in mind the lessons learned the year before, Nicolet FEAR began year two with a preseason, holding team meetings throughout November and December. Additionally, the team realized that it needed a feeder program to ensure sustainability. With the help of mentors, the team created a *FIRST* Lego League program, starting out with two teams at Maple Dale and twenty middle schoolers.

Nicolet FEAR designed a frictional fitting structure for the pit (80% of the pit we have today!). Another practice Team 4786 put into place for year two was attending two regionals. Two competitions meant more match time for the robot (and the team!) and a greater chance for success. Competing before the Wisconsin Regional allowed for improvements in robot functionality and in award presentations before performing in front of sponsors and families at the home regional.

The Central Illinois Regional was tough, due partly to the venue (a non-permanent structure) and partly to the first year of the regional (though we did meet Woodie Flowers!). At the Wisconsin Regional, Nicolet FEAR ranked sixth in autonomous performance; the team realized it's possible to win games on autonomous alone.

For the Aerial Assist game, Nicolet FEAR decided on a mecanum drive train. Unfortunately, the drive train did not work as well as the team had hoped, teaching the team the importance of practicing concepts before building them in build season.

Over the summer, Nicolet FEAR built <u>Robot Yount</u> and threw the first pitch at a Milwaukee Brewers baseball game in Miller Park!



FEAR 3.0 - 2015

Competitions:

- Northern Lights Regional (Duluth, MN) Rank 33
- Wisconsin Regional (Milwaukee, WI) Rank 15

Awards:

- Regional Finalists (Northern Lights)
- <u>Safety Award</u> (Northern Lights)







FEAR 3.0 - 2015

During preseason, FEAR transitioned its FLL program to one run at Nicolet through the Rec Department, growing to four teams representing four school districts. We also added a middle school teacher as the Lead FLL Mentor & FEAR high schoolers as mentors and created summer sessions to promote program growth.

Wanting a challenge, the team decided to attend the Northern Lights Regional in Duluth, Minnesota. Nicolet FEAR wanted to prepare for the Wisconsin Regional by facing tougher competition earlier in the season. At competition, the team started implementing checklists in the pit. The pit crew would follow the checklists to ensure the robot was in working condition before entering the field.

The Northern Lights Regional was an incredible opportunity for outreach and Team 4786 formed strong connections with other teams. Nicolet FEAR was picked by the 2nd seed alliance and went on to make it all the way to finals! It was the furthest the team had gone in competition.

During build season, many components of the robot had not been challenged enough. Designs were chosen based on appearance rather than functionality and poor planning led the team to literally cut the robot in half and rewire everything on the first day of the Wisconsin Regional. Ironically, the electrical system ended up being the best one in Nicolet FEAR history.

At the Wisconsin Regional, despite outstanding performance, Nicolet FEAR was not picked to be on an alliance. Team 4786 realized that building relationships with Wisconsin teams was something to improve upon in the future.



FEAR 4.0 - 2016

Competitions:

- Northern Lights Regional (Duluth, MN) Rank 36
- Wisconsin Regional (Milwaukee, WI) Rank 31

Awards:

• Entrepreneurship Award (Northern Lights)







FEAR 4.0 - 2016

For Nicolet FEAR's fourth year, the team member total soared to 67 students. Similar to previous years, the team's organization consisted of student managers and directors for game mech, drivetrain, programming, electrical, special operations, strategy, business, and community outreach. Team members stayed in the same group throughout preseason and build season.

Groups used a modified version of GE Healthcare's "AGILE" system including scrum boards (posters with sticky notes hung up in the hallways) to keep track of deadlines and task assignments. During preseason, RoboKnight, a t-shirt shooter for athletic/spirit events, was introduced as a long-term preseason project. Nicolet FEAR started holding design reviews, meetings with a large group of students and mentors in which a few students presented the design choice. The audience asked questions and decided whether or not to give approval for the group to move forward.

FIRST Stronghold had a goal of getting past defenses and storming the other alliance's castle. FIRST worked with Disney Imagineers to create this game, starting the trend of heavily themed games in FIRST Robotics Competition. In build season, Nicolet FEAR worked together to build a second robot in three days, fixing the problems of the otherwise identical original. Nicolet FEAR held a very successful robot reveal as part of a larger Fine Arts Showcase event that took place in the theater the week before stop build day.

At competition, scouting was extremely important to predict what defenses the opposing team would choose for their side of the field. Other teams wanted to work with Nicolet FEAR due to the team's outstanding data collection & analysis.



FEAR 5.0 - 2017

Competitions:

- Northern Lights Regional (Duluth, MN) Rank 60
- Wisconsin Regional (Milwaukee, WI) Rank 12

Awards:

• <u>Imagery Award</u> (Northern Lights & Wisconsin)





FEAR 5.0 - 2017

In year 5, Nicolet FEAR added another branch of the team: Media. The Media Team took photographs, filmed and edited videos, updated the new FEAR website, and continued to grow social media presence. Meanwhile, Community Outreach maintained relationships with sponsors, like our top sponsor, Todd Gaulke of Todd's Tools, LLC, a North Shore Franchisee for Snap-on Tools. Additionally, Nicolet FEAR secured a NASA Grant due to the loss of the team's anonymous major sponsor.

The team again attended the <u>Northern Lights Regional</u>. This time, however, was not nearly as successful. Nicolet FEAR watched its rank drop lower and lower until landing in 60/60 and finishing the regional without winning a single match. Despite the team's performance on the field, Nicolet FEAR received the Jack Kamen Imagery Award for cohesive branding on t-shirts, banners, pit signs, the mascot, and the robot. The new Media Team proved its worth by scoring an <u>exclusive interview with Dean Kamen</u> during his surprise visit to Duluth.

Unwilling to give up, Nicolet FEAR put a plan in place for the Wisconsin Regional, where the team made an epic comeback and ranked 12th overall. In an effort to develop stronger relationships with other teams, Nicolet FEAR handed out homemade "Kit of Parts" boxes to teams five years old and younger. The boxes held old tools and parts that other teams could use. Nicolet FEAR received the Imagery Award again at the Wisconsin Regional for outstanding branding.



FEAR 6.0 - 2018

Competitions:

- Heartland Regional (Kansas City, MO) Rank 6
- Wisconsin Regional (Milwaukee, WI) Rank 15
- World Championships (Detroit, MI)
 - o Archimedes Division Rank 11

Awards:

- Entrepreneurship Award (Heartland)
- <u>Safety Award</u> (Heartland)
- <u>Team Spirit Award</u> (Wisconsin)
- Regional Finalists (Wisconsin)







FEAR 6.0 - 2018

FEAR 6.0 installed a new system with two branches: Operations and Communications, each with a student Vice President. Projects changed every sprint (1-2 week time block). The new structure allowed for more cross training and flexible projects schedules. Nicolet FEAR began build season with seven Robot Archetype Groups (RAGs), which created a cardboard model of a robot. These models offered different designs for the team to use moving forward.

Nicolet FEAR attended a new regional in Kansas City and successfully led a double climb by <u>lifting an alliance robot in the air</u>. Nicolet FEAR was successful because the team <u>specialized in a minor game component</u>. Team 4786 completely redesigned and built a new game mech between the two regionals.

At the Wisconsin Regional, FEAR became close friends with Team 930 Mukwonago BEARs. Although Team 4786 lost in the finals, FEAR was granted a wildcard since two teams on the opponent alliance had already qualified for World Championships. In other words, Nicolet FEAR's wildcard was only slightly less rare than a unicorn. The announcer accidentally read off "Team 0," but corrected his mistake and Nicolet FEAR headed for Worlds in Detroit, MI.

At World Championships, Nicolet FEAR implemented #findFIRSTY, was the highest ranking Wisconsin team and was the 8th seed captain in its division. 1259 Paradigm Shift, another Wisconsin team, joined their alliance. In the quarterfinal, Nicolet FEAR faced the top seed alliance that included two Hall of Fame teams. Team 4786 lost the tiebreaker match but returned to Milwaukee with a new status among Wisconsin teams.