

# THE NUTS AND BOLTS

TECHHOUNDS NEWSLETTER - 01/07/2019

## Preseason

The robotics season is split into four categories: Preseason, Build Season, Competition Season and Post Season. Preseason gives "rookie" members a chance to learn new skills and pass necessary safety tests. This year students were required to attend one offseason event (such as a competition or outreach workshop) to satisfy a requirement in order to join the team. The following is a sample of events this Preseason followed by a short description.

### LateNighter

This event is a long-standing TechHOUNDS tradition, with the goal of bringing all members together regardless of age or division. The night started off with the whole group working together on team builders. After a break for dinner, five randomly assigned groups were formed to take on the main challenge of the evening: the scavenger hunt. Spread around the school were 10 stations featuring activities and a clue that led the group to the next station. After all the groups completed each station they participated in an egg drop competition.



team working on cup stacking activity [LateNighter]

### CAD Workshops

During the fall of 2018, the TechHOUNDS held their first set of CAD (Computer Aided Design) workshops for middle school students at the Carmel Clay Public Library. During each 3-hour workshop, a few dozen students learned how to use the program Autodesk Inventor, working closely with TechHOUNDS veteran members. The goal was to encourage innovation and increase interest in engineering design by modeling iconic props from popular movies such as the Black Pearl from the *Pirates of the Caribbean*, the Millennium Falcon from *Star Wars*, and Hogwarts from *Harry Potter*.

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## UPCOMING EVENTS

<b>Kick-Off</b>	01/05/2019
<b>Women in Techology Workshop</b>	03/02/2019
<b>Tippecanoe Event</b>	03/23-24/2019
<b>Center Grove Event</b>	03/29-30/2019

# Preseason Competitions



[Indy RAGE] drive team victory photo



[Boiler Bot Battle] crowd holding "868" signs

## Purdue Forums

On Saturday, October 6th the TechHOUNDS attended the annual Purdue FIRST Forums, a convention hosted by IndianaFIRST. The convention included various workshops and panel discussions to educate both rookie and veteran members on the various technical, business-related, and general aspects of participation in FRC and other FIRST competitions.

## Indy RAGE

The TechHOUNDS kicked off their first Preseason competition of the year at Indy RAGE on September 29. Indy RAGE (Raising Awareness for Girls in Engineering) took place at Perry Meridian High School, home of FRC 234 "Cyber Blue." The all-female drive team consisted of driver Indraja Chatterjee (junior veteran), operator Chelsea Tinsley (junior veteran), technician Deetya Iyer (junior veteran), human player Ella Holcomb (freshman rookie) and drive coach Laura Dobie (alum). The TechHOUNDS placed first with alliance partners FRC 4265, the "Secret City Wildbots" and FRC 1529, the Southport High School "Cyber-Cards." This win followed the TechHOUNDS' 5th place ranking at the Detroit World Championship in April the previous season and was a strong start to the 2018-19 Preseason.

## CAGE Match

Held on October 20th and hosted by the Southport High School team Cybercards, CAGE Match was the TechHOUNDS' second Preseason competition. The TechHOUNDS were the first pick by the first seed alliance captain FRC 1018 "Pike Robodevils" and competed alongside FRC 447 "Team Roboto." Following two quarterfinal matches, a major power outage occurred in the Indianapolis area, forcing a temporary intermission. After an hour of waiting, the competition resumed, converting to a single elimination match. The TechHOUNDS placed first in the competition and won the "Givingest of Givers" Award for most canned food items donated.

## Boiler Bot Battle

The final competition of the Preseason took place at Purdue University in West Lafayette. The TechHOUNDS formed the 1st seed alliance with FRC 1747 "Harrison Boiler Robotics" and FRC 5069 "Iron Giants." During the tiebreaker of the final round of competition, the field management system shut down, damaging the TechHOUNDS' robot Quickdraw. Unfortunately, the TechHOUNDS lost the rematch with a score of 267 - 422, ending the Preseason as a Finalist.

# DIVISION UPDATES

During Preseason in Robot Ops we focused primarily on furthering the skill sets of our members beyond basic FRC design techniques. This involved improving everything from our design philosophy, construction methodology, and even our tooling and organization. This effort is intended to improve efficiency during build season to make the most of our limited time frame.



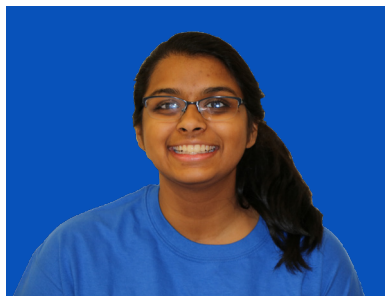
## ROBOT OPERATIONS

Construction spent this preseason working on the electrical cart, renovation of the pit, and field walls. We also completed tool training with all of our rookie and veteran members.



## CONSTRUCTION

The team has done a phenomenal job this Preseason, training and getting ready for 2019 DEEP SPACE. The members have been working very hard so far to meet all the requirements for the team. Although TechHOUNDS members are held to very high standards by their respective leads and mentors, the members have exceeded all expectations and have demonstrated amazing potential for the 2019 Build Season. Keep up the hard work, everyone!



## TEAM LEAD



## PUBLIC RELATIONS

This Preseason PR received a large influx of students, allowing us to broaden our options when it comes to media production. A lot of our time was spent teaching new members whether it be digital (InDesign, Illustrator) or physical (vinyl, laser engraver).

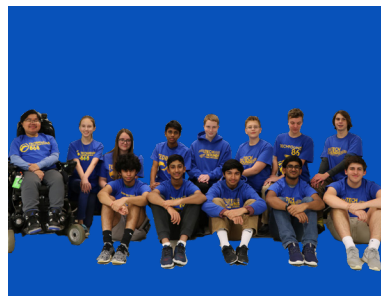
We are looking forward to making this season awesome!



## PROGRAMMING / ELECTRICAL

New members worked to get up to speed on important electrical and programming skills and applied those skills by rewiring and reprogramming our team's robot from 2013.

Veterans worked to adapt to the new VS Code programming environment, to set up the Jevois Machine Vision Camera, and to enable motion profiling.



## INFORMATION TECHNOLOGY

IT has been sharpening their programming skills in preparation for build season. The new members have been learning to code in HTML and JavaScript, while the existing members have been teaching the new members and working on improving their own skills. The division as a whole has been moving towards the perfect scouting system and strategy app.

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