THE NUTS AND BOLTS

Scouting System

At FIRST Robotics Competitions, creating the perfect alliance is a key factor to success. Each year, Tech-HOUNDS utilizes a "Scouting System," or a program to determine the strengths and weaknesses of other teams, to achieve this goal. The IT Division develops and programs a new system each year, monitoring important aspects of the teams to analyze. They use a combination of programming languages including JavaScript, HTML, and CCS to create the system. Each language serves a different purpose: JavaScript is used to build the "foundation" of the webpage and runs basic tasks, HTML formats the webpage, and CCS allows programmers to design the webpage.

The Rasberry Pi is used to access the Scouting System.

According to IT lead Aryan Indarapu, the entire system is kept on a website that only the team can access. It is stored on the servers of a transportable computer known as a "Raspberry Pi." The Raspberry Pi is a credit-card sized computer that can be easily programmed to perform a variety of functions. Its size and structure has proven to be extremely beneficial to the team.

The scouting system is currently in its final stages of development and will give the TechHOUNDS an advantage during the 2018-19 competition season.

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## CONTENTS

UPCOMING EVENTS

Stop Build Day 02/19/2019
Robot Reveal & Open House 02/19/2019
Women in Techology Workshop 03/02/2019
Tippecanoe Event 03/23-24/2019
Center Grove Event 03/29-30/2019

Robotics Design and Innovation

The 2018-19 school year introduced the first ever Robotics Design and Innovation (RDI) class, taught by TechHOUNDS lead coach Zachary Bonewit. According to TechHOUNDS Public Relations Lead Bryce Castle, who is currently enrolled in the course, "The Robotics Design and Innovation class is an extension of the time spent at TechHOUNDS. RDI allows you to delve deeper into the theory of robotics and build your robotics skills while learning new things along the way." In the first semester, the biggest project assigned to students was "Swept Away," a competition in which teams of two had to design a robot to transport balls of varying sizes using VEX robots. The robot that transported the greatest number of balls the furthest won the competition.

An example of a robot built for the "Swept Away" competition.
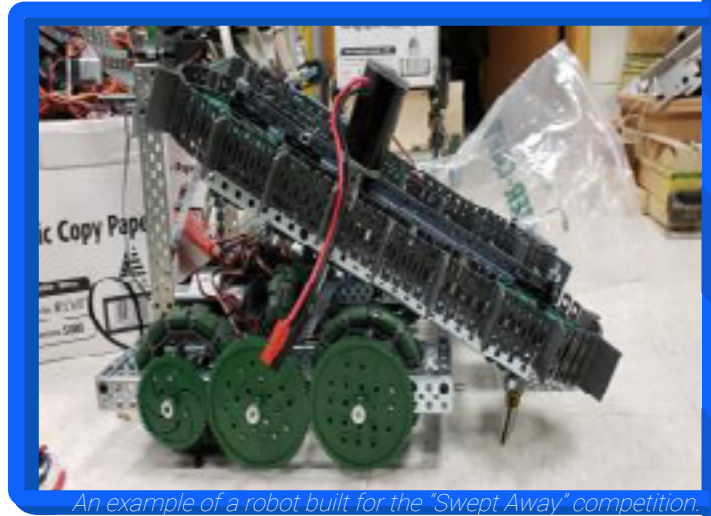
To enroll in the course, students must either have completed at least two previous engineering courses, been a member of the TechHOUNDS for at least two years, or received a recommendation from an Engineering and Technology teacher. Students should submit an application to their counselor during their scheduling meeting if they are interested in taking the course. The class will be fully weighted during the 2019-20 school year.

Chipotle Fundraiser

On January 15th, Programming/Electrical member Jimmy Daly organized a Chipotle fundraiser to support the TechHOUNDS. From 4pm to 8pm, anyone who showed cashiers a specialized flyer at the 146th Street Chipotle had 33% of their purchase donated towards the team. The fundraiser proved to be successful, raising over $240. The team would like to thank those who attended the event!

MEET OUR TEAM

A weekly showcase of the members & mentors who make our team tick.

WHAT MADE YOU WANT TO JOIN TECHHOUNDS?
Mr. Ryker told me about it at a social gathering, and I enjoy working with technology and robots so I decided to join the club.

SO FAR, WHAT'S THE MOST INTERESTING THING YOU'VE LEARNED?
The most interesting thing I learned was how how to use a soldering iron. I also enjoyed preparing the 12 Volt competition batteries for the robot and repairing old batteries.

LUCAS MUNTEANU
ROOKIE

WHAT ARE YOU LOOKING FORWARD TO DOING?
My biggest goal this build season is building a successful robot.

WHAT IS THE MOST IMPORTANT THING YOU LEARNED FROM TECHHOUNDS?
TechHOUNDS has taught me that being on a robotics team isn't just about building a robot. The fact that so many different skills and talents are useful in creating all the aspects of this team still amazes me to this day.

DO YOU HAVE ANY WORDS OF ADVICE FOR ROOKIES?
To the rookies, I would say try to learn as much as possible with whatever you're doing. Your time at TechHOUNDS may be limited but the skills you learn will last for a long time.

WHAT HAVE YOU LEARNED FROM TECHHOUNDS THAT YOU WILL BE TAKING TO COLLEGE?
My ability to communicate and work with others who have skills that I lack will be essential for my future. TechHOUNDS has allowed me to explore what I'm best at so that I can plan for college and beyond.

ETHAN MORAN
4th YEAR
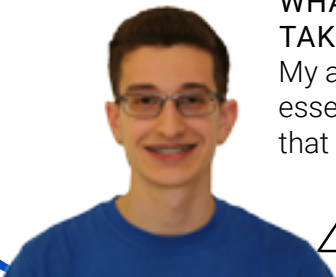
WHAT DOES BEING A MENTOR ENTAIL?
The biggest part of being a mentor is just being present and making sure the kids are on task and aren't getting injured.

WHAT IS YOUR FAVORITE PART ABOUT BEING A MENTOR?
My favorite part of being a mentor is hanging out with the kids and helping out in any way I can!

WHAT IS YOUR PROFESSION?
I'm an Engineering/Technology teacher at CHS.
I teach Project Lead the Way courses "Introduction to Engineering and Design" and "Civil Engineering and Architecture in addition to "Introduction to Design Process."

MRS. ERLI
MENTOR

(Picture unavailable)

DIVISION UPDATES

"This week in Robot Ops we started to manufacture parts of the robot, which we will eventually outsource to a local company. We also finalized prototypes to be machined."
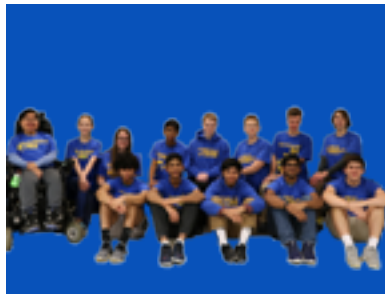
ROBOT OPERATIONS

"This week in Public Relations, along with the weekly newsletter and division video featuring IT, we also wrapped up several loose projects from last week including spirit wear designs. This year spirit wear is purchasable online and we can't wait to see everyone wearing this year's swag."

PUBLIC RELATIONS

"This week in Construction, we began creating player station walls for the practice field. We also continued to work on our preseason projects. These include finishing up the second version of the electrical cart and building a table for GyanSys."

CONSTRUCTION

"This week in Programming/Electrical, we worked on the vision system in order to identify the reflective tape on the rockets. In addition, we worked on programming a "climber" prototype that Robot Ops completed, and developed sensors to provide more input to the robot drivers. On the electrical side of the division, we repaired the motor tester and working with pneumatics."

PROGRAMMING / ELECTRICAL

"This week in IT, we tested the scouting system and edited the frontend while working on the backend so that Node.js is compatible with the MySQL Server. We also began testing the system on the Raspberry Pi. "

INFORMATION TECHNOLOGY

"This week the mechanical divisions confirmed the design lock for the robot. Our team goal for the next three weeks is to focus on getting everything put together in time for competition while the support divisions put the final touches on areas that reflect our team prestige: the practice field, the merchandise, and the scouting system."

TEAM LEAD

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