



BROWNCOATS

Team 7842 Engineering Notebook



OUTREACH: COMMUNITY CONNECTIONS

Date:	March 3, 2020	Time:	1:00 pm - 2:00 pm
Location:	AvaLAN Wireless	Reach:	100
Team Attendance:	Ian, Megan, Jalynn		

WHNT Interview

On March 3rd, our team was interviewed by WHNT for a 3-part web series about FLL, FTC, and FRC. We were one of the FTC teams who were interviewed.

Our veteran team members, Ian, Megan, and Jalynn, as well as our coach Mr. Jeff, were interviewed. He asked lots of questions about how our team has done this season, what *FIRST* means to us, and what FTC is. Once we finished with the interview portion, we drove Vera around so people can see the challenge and how it works.

Each part of the series will be available online for people to read, and we're very excited to have been a part of it! This will be a fantastic way to spread awareness of *FIRST* Robotics and STEM within our community to people who might not have heard about it before.

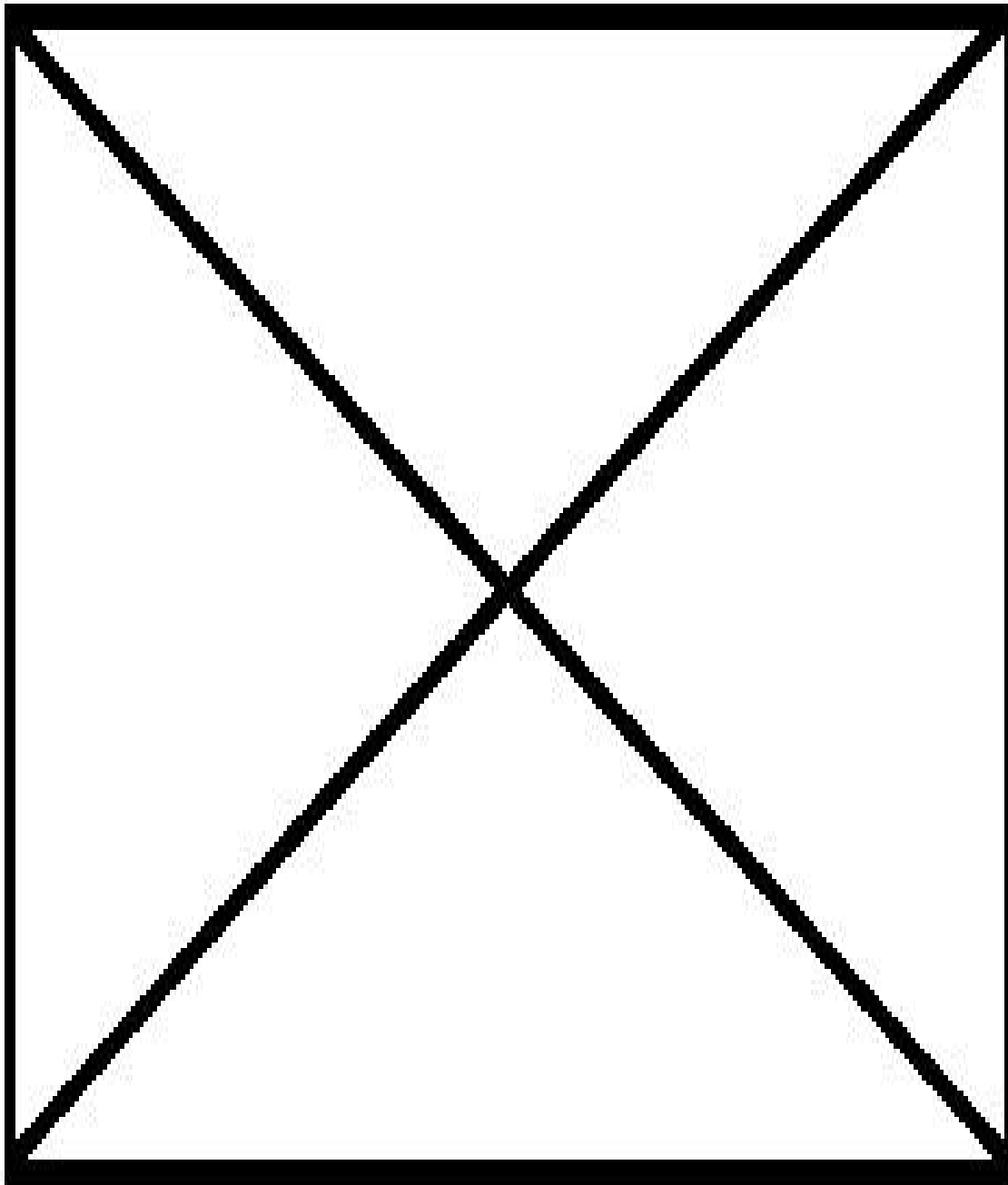




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OUTREACH: COMMUNITY CONNECTIONS





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OUTREACH: COMMUNITY CONNECTIONS

Date:	March 14, 2020	Time:	9:00 am - 5:00 pm
Location:	Madison Public Library	Reach:	150
Team Attendance:	Jalynn, Joel, John		

Informational Meeting

On Saturday, March 14th, the Browncoats hosted an informational meeting at Madison Public Library. The team has gained much from past meetings like this, and we were excited for the chance to host another one!

We brought our 2019-2020 competition robot, Vera, to demonstrate last season’s challenge as well as our two outreach robots for the kids to drive. Throughout the day, about fifteen families and over one hundred interested individuals came by to watch Vera, and their kids had lots of fun driving the little robots! We handed out flyers with information about our team and *FIRST* to anyone who was interested in robotics, and lots of our 3D-printed robots were given away. In addition to reaching out to our community and seeking out possible recruits, it also gave our younger team members a chance to practice driving and their public speaking skills.

Overall, the informational meeting was very successful! We were able to bring awareness of the FIRST program to our community and even gained a new team member!



OUTREACH: COMMUNITY CONNECTIONS



Lots of kids came by and had fun driving our robots!



Several parents were impressed by Vera as well!



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OUTREACH: COMMUNITY CONNECTIONS

Date:	October 17, 2020 October 24, 2020	Time:	8:00 am - 4:00 pm
Location:	The Wynn Home	Reach:	40
Team Attendance:	Jalynn, Nathan, Joel, Jaxon, Ellie, David		

Yard Sales and Robot Demonstration

On Saturday, October 17th, the Browncoats had a yard sale to raise money for the coming 2020-2021 season. we held a garage sale as a fundraiser for the upcoming season. We also brought our outreach robot along and used the sale as an opportunity to spread the word about *FIRST* Robotics by demonstrating our robot and discussing *FIRST*.

The team received a bunch of donations from its members, their families, and Browncoats supporters, and Nathan and his family offered to hold the sale on their huge yard. We also brought along one of our outreach robots to drive around to give an idea of what our team is about. We spoke with several interested customers including at least one *FIRST* alumni, who was super interested in how the *FIRST* Tech Challenge robots worked. We handed out flyers to several people, including one parent interested in finding an *FLL* team for her child.

By the end of the sale, we had sold a lot of the donations, but there was still a lot left. Ms. Stephanie, Nathan's mom, offered to host a second garage sale on the next Saturday, October 24th. After the second garage sale, anything left was donated to thrift stores. In total, the Browncoats earned around \$1,200 from the garage sales, along with the chance to spread the word about the Browncoats and *FIRST*! The Browncoats brought any clothes or winter articles that were left after the sales to Downtown Rescue Mission. We had been aware of their need for winter clothing in the last couple months, and we were more than happy to give them what we had!

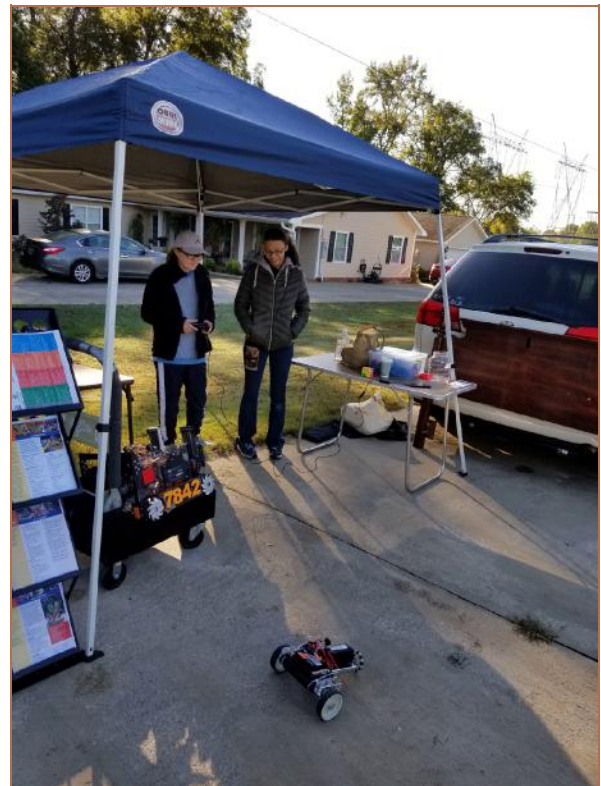


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Date:	April 19, 2021	Time:	12:00 pm - 1:00 pm
Location:	Hope United Academy	Reach:	20
Team Attendance:	Joel		

Robot Demonstration

Joel took our 2020-2021 competition robot, Vera, to his school - Hope United Academy. He was able to tell his class about *FIRST* robotics, the Ultimate Goal challenge, how the robot works, and what parts he designed on the robot. His classmates were very excited to see the robot.

This was a great opportunity to tell more of the community about *FIRST*, Ultimate Goal, and the Browncoats.

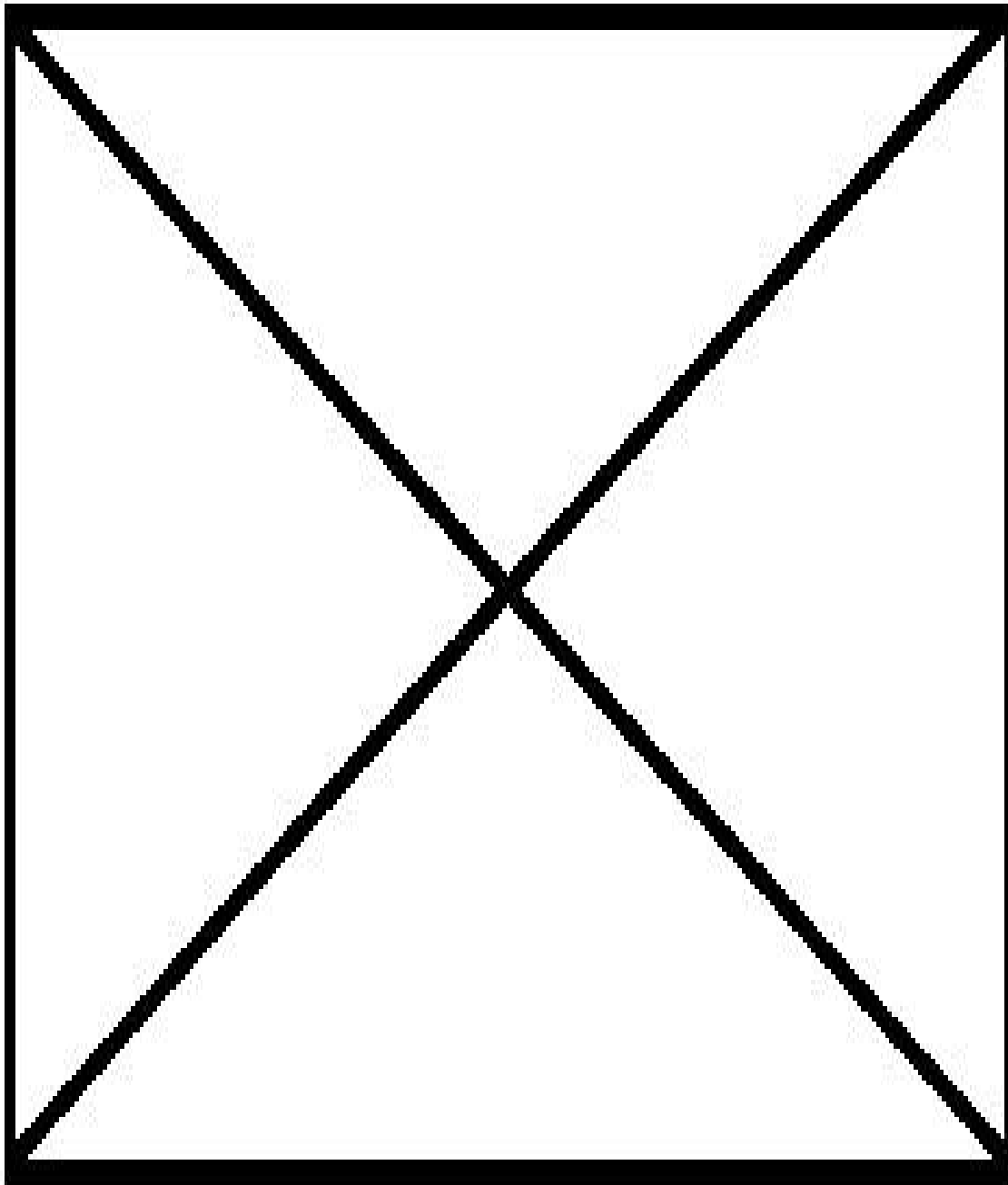


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BROWNCOATS Team 7842 Engineering Notebook



OUTREACH: COMMUNITY SERVICE

Date:	Spring 2020	Time:	Various
Location:	Various Browncoats Residences	Reach:	1,000's
Team Attendance:	Browncoat team members, coaches, and mentors		

COVID-19 Personal Protective Equipment

Our team members, coaches, and mentors were able to provide Personal Protection Equipment to many different people for protection against COVID-19, including face shields, “stress relief straps”, and face masks.

When the Covid 19 pandemic hit in March 2020, one of our team mentors found a YouTube video by Destin Sandlin of the Smarter Every Day channel where he suggested coordinating all the makers in the Huntsville area with 3D printers to make face masks and other Personal Protection Equipment (PPE) for area medical workers. By the time the "Team #HuntsvilleFightingCovid" stopped in mid-April, almost 10,000 face shields had been printed and donated by hundreds of volunteers. The Browncoats did their part, contributing 42 face shields to this effort.

About a week later, the Browncoats were contacted by someone who was independently coordinating the production and distribution of mask "Stress Relief Straps" for area medical workers. She asked if the Browncoats could help out and provided a VA Doctor-approved pattern to print. The Browncoats responded by printing over 1,100 straps and face masks, all of which eventually went to the following recipients: Huntsville Hospital, #HuntsvilleFightingCOVID, Naval Academy, Rhode Island, Madison Family Practice, Huntsville Surgical Associates/Blackwell Tower, CVS Pharmacy, Madison, Kindred Home Health Care, Metro Infectious Disease Consultants, Unitypoint Finley Hospital, Dubuque, IA, Athens Hospital, Publix Grocery Stores, Huntsville Cardiovascular Clinic, Sports Med, Huntsville ENT, and The Orthopaedic Center.

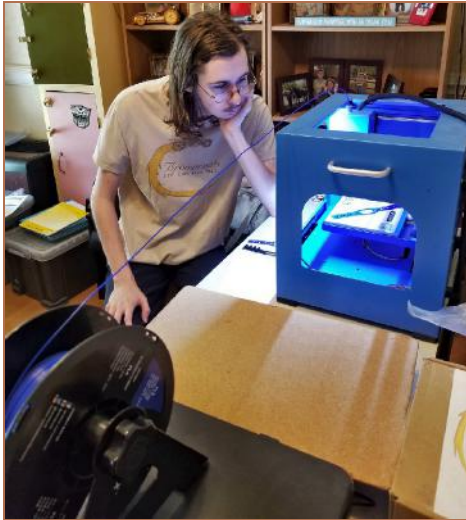
Also during this time, FIRST in Michigan issued a "Call to Action 1 Million PPE Challenge". On their web site, they invited FIRST teams to register and participate in the production and distribution at least one million pieces of PPE (cloth masks, ear saver straps, and face shield frames). In total, over 2.2 Million PPEs were donated, with the Browncoats contributing almost 1,150 items out of the 3,591 generated by teams within the state of Alabama.



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OUTREACH: COMMUNITY SERVICE



Team members and mentors with 3D printers worked hard this summer printing Ear Savers and other PPE equipment



These will help doctors and other medical professionals during the COVID-19 outbreak



Our grateful friends at Huntsville Hospital. . .



. . . And Metro Infectious Disease Consultants!



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OUTREACH: COMMUNITY SERVICE



930 Franklin Street
Huntsville, AL 35801
(256) 533-3388
1-800-537-8529
Fax (256) 801-6905

1107 14th Ave SE
Suite 100
Decatur, AL 35601
(256) 351-0688
Fax (256) 301-4748

1100 South Jackson
Highway, Suite 104
Sheffield, AL 35660
(256) 381-8811
Fax (256) 381-5677

1041 Balch Road
Suite 350
Madison, AL 35758
(256) 817-3955
Fax (256) 817-5956

2525 US Hwy 431
Suite 130
Boaz, AL 35957
(256) 840-4580
Fax (256) 840-4585

101 Fitness Way
Suite 2700
Athens, AL 35611
(256) 233-9273
Fax (256) 216-1920

15225 Hwy 43
Suite B
Russellville, AL 35653
(256) 331-5828
Fax (256) 331-8615

www.theheartcenter.md

Huntsville Hospital Heart Center
930 Franklin St.
Huntsville, AL 35801
256-533-3388

April 22, 2020

Mr. Barry Birdsong
Missile Defense Agency
Director, Industrial Manufacturing and Technology
Bldg. 5225, Martin Rd
Redstone Arsenal, AL. 35898

RE: Surgical Mask Bands

Dear Mr. Birdsong,

On behalf of the Huntsville Hospital Cardiovascular Service Line we would like to extend our gratitude to the Industrial Manufacturing and Technology organization at the Missile Defense Agency for your efforts in providing much needed items to our healthcare facility. Not knowing what impact the pandemic would have on our community, every effort was made to preserve enough PPE equipment to take care of the Covid-19 patients and keep our staff safe. One of the ways this was done was by allowing staff to wear handmade cloth masks in appropriate environments and saving the N95 masks for care of the Covid-19 patients. Handmade masks are worn by staff during 8-12 hour shifts, so the staff experienced a lot of discomfort. The provided bands relieve tension and make the masks much more comfortable to wear.

Names:

America Makes
Denise Harris-Coordination effort
David Busby-Coordination effort
Chera Robinson-Printer
Jeff Robinson-Printer
Melissa Burnette-Printer
Motorized Mayhem Robotics (POC: Max Patin)
Browncoats Robotics (POC: Jeff Stewart)-Printer
Jim Powell-N95 mask donation

Warm Regards,

Dwayne Mathis RDCS, MBA
Director of Cardiology Services HH
and the Heart Center

Dorothy Young RVT, RDCS
Clinical Ultrasound Educator



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OUTREACH: COMMUNITY SERVICE

Gmail - Ear Savers/SportsMed

<https://mail.google.com/mail/u/3?ik=b311325c4c&view=pt&search=all...>



FTC Browncoats. <ftcbrowncoats@gmail.com>

Ear Savers/SportsMed

1 message

Mahogany_Soul <dreme.izey@gmail.com>
To: ftcbrowncoats@gmail.com

Tue, May 19, 2020 at 9:26 AM

Thank you so much for the donation of ear Savers! We greatly appreciate it.
Attached are a few pictures, as promised.

Kindest regards,

6 attachments



20200518_133045.jpg
2278K



IMG_7432.jpg
431K



20200518_131917.jpg
4140K



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Gmail - Ear Savers/SportsMed

<https://mail.google.com/mail/u/3?ik=b311325c4e&view=pt&search=all...>



received_170209254410651.jpeg
875K



20200518_104743.jpg
2983K



20200518_131259.jpg
3151K



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OUTREACH: COMMUNITY SERVICE

Gmail - FW:

<https://mail.google.com/mail/u/3?ik=b311325c4e&view=pt&search=all...>



FTC Browncoats. <ftcbrowncoats@gmail.com>

FW:

1 message

Jade Mann <jmann@innovativeventures.com>

Thu, May 7, 2020 at 10:44 AM

To: "ftcbrowncoats@gmail.com" <ftcbrowncoats@gmail.com>

Thank you so Much! We greatly appreciate your donation!

Jade Mann

MA-MIDC AL

256-469-7200-P

256-469-7201-F

From: Jade [mailto:jadeshepard87@gmail.com]

Sent: Thursday, May 07, 2020 10:34 AM

To: Jade Mann

Subject:

This email has been scanned for email related threats and delivered safely by Mimecast.
CONFIDENTIALITY NOTICE: This message and any included attachments are from Metro Infectious Disease Consultants and are intended only for the addressee. The information contained in this message is confidential and may constitute inside or non-public information under international, federal, or state securities laws. Unauthorized forwarding, printing, copying, distribution, or use of such information is strictly prohibited and may be unlawful. If you are not the addressee, please promptly delete this message and notify the sender of the delivery error by e-mail or you may call MIDC corporate offices in Burr Ridge, Illinois U.S.A at (+1) (630)-590-2850.

2 attachments

1 of 2

5/19/2020, 10:03 AM



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OUTREACH: COMMUNITY SERVICE

Date:	October 24, 2020	Time:	1:00 pm - 2:00 pm
Location:	Huntsville Downtown Rescue Mission	Reach:	100
Team Attendance:	Jalynn, Nathan, Joel, David, Ellie		

Winter Clothes Donation
<p>Throughout the month of October, our team collected winter clothes, blankets, and more by reaching out to our community. We had been aware of the need for winter clothing and blankets, and we were more than happy to donate what we had collected to help provide for those in need.</p> <p>In addition, after the team’s yard sales in October, there were still quite a few clothes and blankets left over. Plus, we still had people giving us clothes that they wanted to donate. We pooled all of these together, sorted through them, and once we had them all, we delivered them to the Huntsville Downtown Rescue Mission, who thanked us heavily for our donations. They said we were a great help, and we couldn’t be more thankful for this opportunity to provide to those less fortunate.</p> <p>We’re very happy we were able to help, and we can’t wait to do this again next year!</p>



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OUTREACH: COMMUNITY SERVICE





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OUTREACH: ENGINEERING CONNECTIONS

Date:	February 29, 2020	Time:	8:00 am - 5:00 pm
Location:	Space & Rocket Center, Huntsville, AL	Reach:	200
Team Attendance:	Ian, Megan, Jalyynn, Joel, Nathan		

Space & Rocket Center Robotics Day
<p>Last year, after the Alabama State Championship and before the Coronavirus pandemic shut everything down, the Browncoats were invited to attend the Space & Rocket Center’s Robotics Day. We were in attendance with three other <i>FIRST</i> Tech Challenge teams, two <i>FIRST</i> Lego League teams, and two <i>FIRST</i> Robotics Competition Teams.</p> <p>Every team brought their competition robots, and every thirty minutes, a team would introduce themselves and their level of <i>FIRST</i>. Fields were set up so we could run competition matches with live scoring to show the crowds how a match works with all four robots on the field. Everyone was interested in learning what they could about the program, and we had several people interested in joining or creating their own teams, so we handed out all of the information we had to them. This was a great way for people to see the differences between three of the four levels of <i>FIRST</i>, and to see how much creativity goes into each robot. It also showed that while we all were given the same challenge, we all came up with different solutions to accomplish it, which is one of our favorite parts of FTC. Some of the <i>FIRST</i> Lego League teams in attendance are planning on moving up to FTC once they graduate out of FLL, and they asked us for advice and resources on how to go about that. We gave them all of our handouts, and we pointed them in the direction of rookie grants and the FTC Jump Start program. We’re also holding an informational meeting for the purpose of recruiting and starting new teams in March, so we invited them to attend that, as well.</p> <p>Not only was this a fantastic event to spread awareness of <i>FIRST</i> Robotics, STEM, and the impact it has to our community, but it was also a great opportunity to connect with other <i>FIRST</i> teams. We always learn so much from other teams, and we enjoy the opportunity to work with them!</p>



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OUTREACH: ENGINEERING CONNECTIONS





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OUTREACH: ENGINEERING CONNECTIONS

Date:	This Season	Time:	Various
Location:	Joel's Home and AvaLAN Wireless	Reach:	
Team Attendance:	Joel		

Software Mentoring

The team did not have a team member that knew how to do programming, so Joel (who was our team photographer last year) graciously agreed to step into the programmer role and learn.

The team software mentor took me through the on-line book “Learn Java for FTC” by Alan G. Smith. The team coach provided a hardware testbed that included a Robot Control Hub and one of each type of hardware component we would be working with. I worked all of the examples in the first 12 sections of the book to learn how to add hardware components to the robot and how to control them from software. The book also explained how to separate the code that deals directly with the hardware into its own “mechanisms” class (known as abstraction or compartmentalization). This allows the OpMode code to be more readable and requires fewer changes to all those classes when hardware code needs to be tweaked.

The Android Studio Guide was used as a reference resource to fill in gaps not covered in the book and to ensure we were current with the 2020/2021 library requirements.

I already had some experience with PyCharm – a modern Integrated Development Environment (IDE). The team software mentor helped me get up-to-speed with the Android Studio IDE.

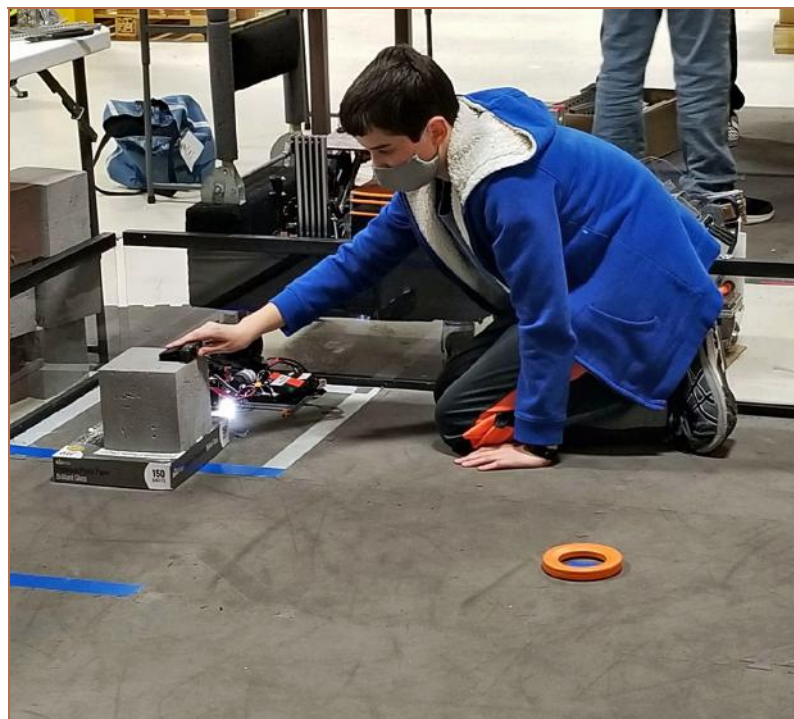
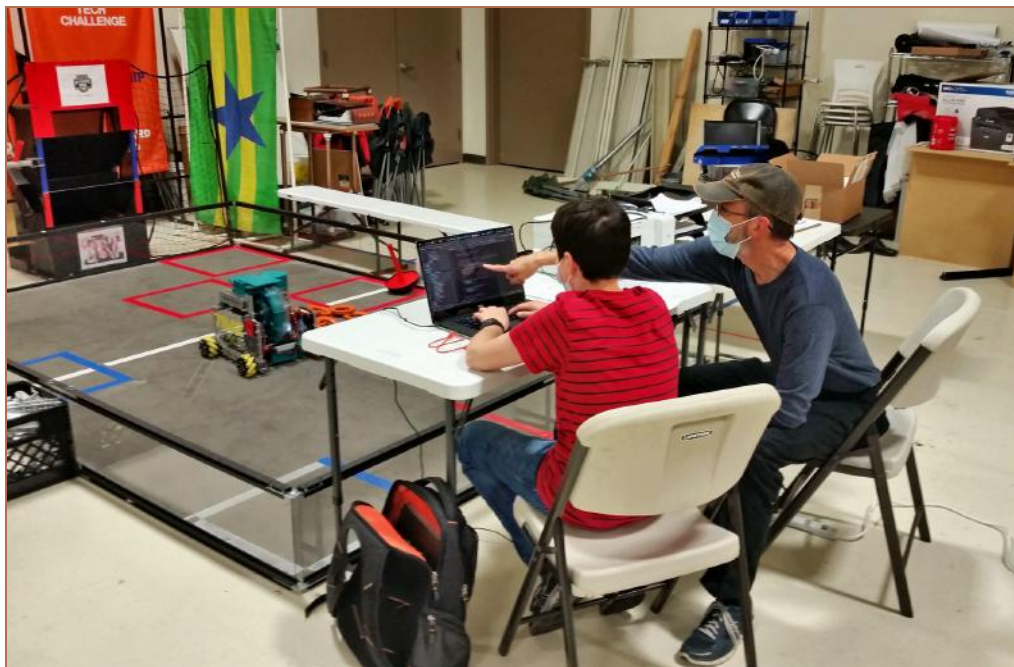
Since I was brand new to FIRST robotics programming this year, our mentor assisted with the design and coded the more complex portions of the code (such as the state machine and machine vision). The goal of the mentor was to NOT re-use much software, but for the team to code from scratch as much as possible in straightforward, understandable chunks to maximize learning.



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OUTREACH: ENGINEERING CONNECTIONS





BROWNCOATS Team 7842 Engineering Notebook



OUTREACH: GIVING BACK TO *FIRST*

Date:	Summer 2020	Time:	Various
Location:	The Homes of Jalynn and Megan	Reach:	100+
Team Attendance:	Jalynn, Megan		

Robotics Video Contest
<p>During the summer, senior Browncoats team member, Jalynn, and recent alumni, Megan, collaborated on making a video for the Robotics Video Contest hosted by TN Valley Robotics. They seized the opportunity to spread the word about the <i>FIRST</i> program and share the personal influence robotics has had on each of their lives.</p> <p>The contest participants were all given a list of questions based on the age group of the team or individuals. The questions were designed to explain the benefits of being on a robotics team and what the participants gained from the experience. The top 10 video entries will earn \$100 for their team! Due to social distancing, Jalynn and Megan were unable to work together face-to-face, but they were able to coordinate and organize what needed to be done together remotely. They each filmed themselves answering questions and later edited the scenes together into one video. A couple weeks after they sent in the video, the team received an email notifying them that Jalynn and Megan’s video made the top 10 and earned \$100 for the team!</p> <p>The Browncoats were glad for the chance to find a way to spread the word about robotics and the <i>FIRST</i> program amid these strange times and share how robotics has impacted the lives of its members, current and former!</p>



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OUTREACH: GIVING BACK TO *FIRST*



ROBOTICS VIDEO CONTEST

Sponsored by TN Valley Robotics

HOW TO ENTER:

- **INTRODUCE YOURSELF/YOUR TEAM**
- **RESPOND TO THIS QUESTION:** WHICH ROBOTICS PROGRAM ARE YOU INVOLVED IN AND WHY DID YOU GET INVOLVED IN ROBOTICS?
- **BE CONCISE:** EACH VIDEO SUBMISSION CAN BE NO LONGER THAN 3 MINUTES. GET TO YOUR POINT QUICKLY AND SHARE ONE/TWO MEANINGFUL STATEMENTS SUPPORTING YOUR IDEAS(S).
- **END DATE:** ALL VIDEO SUBMISSIONS ARE DUE BY 5:00PM EDT, FRIDAY, AUGUST 28, 2020.
- **MOVIE LENGTH:** MAXIMUM LENGTH FOR YOUR VIDEO IS 3 MINUTES.
- **FORMAT:** .MP3, .MP4, .AVI, .MOV
- **FILE SIZE:** NO LARGER THAN 64MB
- **UPLOAD YOUR VIDEO SUBMISSION TO THE TNVR GOOGLE DRIVE USING THIS LINK:**
[HTTPS://DRIVE.GOOGLE.COM/DRIVE/FOLDERS/1EE64PBMPHIE_VPAZQLCHBIIQNGQC6BY](https://drive.google.com/drive/folders/1EE64PBMPHIE_VPAZQLCHBIIQNGQC6BY)

