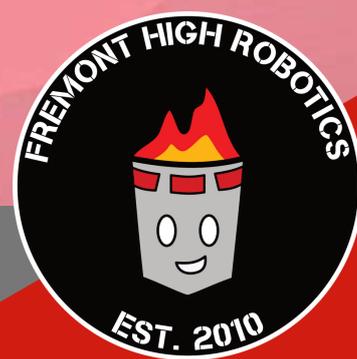
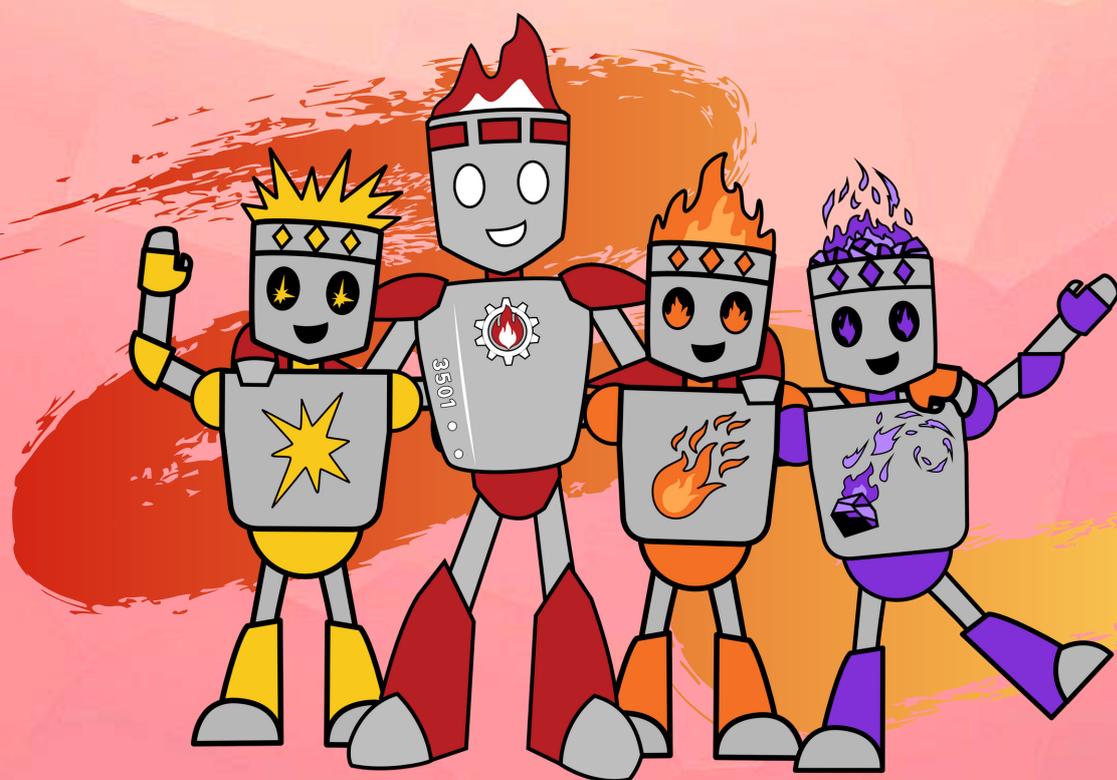


Fremont High Robotics
575 W Fremont, Sunnyvale CA 94087

Fremont High Robotics Outreach Binder

2020-21 SEASON



O U T R E A C H B I N D E R

CONTENTS

- 01 Introduction To FLL
- 02 Intro To FHS Robotics
- 03 FLL Kickoff
- 04 Library RoboFun
- 05 BoyScout Troop 457 x FHS
- 06 BoyScout Troop 87 x FHS
- 07 BoyScout Troop 404 & 406 x FHS
- 08 Stocklmeir RoboFun
- 09 Girls Who Code x FHS Robotics
- 10 FLL Regional Tournament Workshop
- 11 Firebird Fiesta Recruitment

Introduction to FLL

06.15.20

5:30pm - 6:30pm

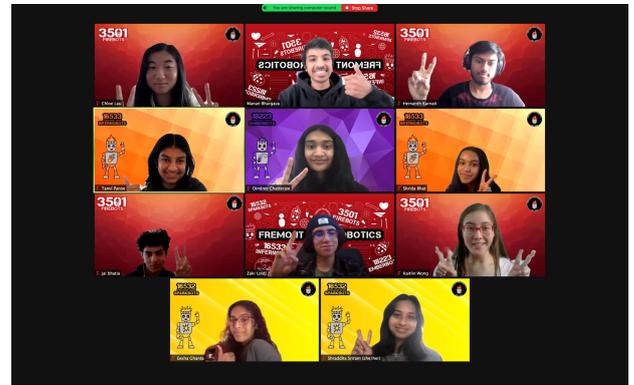
5 Presenters



06.17.20

5:30pm - 6:30pm

5 Presenters



85

kids attended

37

kids attended

At Fremont High Robotics' very first event, students were given an introduction to FIRST Lego League. The event lasted an hour, with many participants. We started off with an overview of the FIRST program, and a more specific overview of FLL. We explained the competition, going over the game, project, and core values. We went on to explain how to get more involved with FIRST and how to start their own team. We finished off with an exciting kahoot and Q&A session. After the event, students showed a grown excitement and interest for robotics!



Intro To FHS Robotics

06.18.20

5:30pm - 6:30pm

5

Presenters

50

kids attended

06.19.20

5:30pm - 6:30pm

5

Presenters

25

kids attended

At the Fremont High Robotics', the team looked to interest and have students consider joining. The team gave the students a background on the FIRST organization, and went deeper into FTC and FRC, as those were the teams that our team had. They also covered the mission statement, which is to develop technical skills such as engineering and in technology, as well as non-technical skills in business, media, event coordination, and game theory and strategy. They also covered the three FTC teams in the organization, the Sparkbots, Infernrobots, and the new addition: the Emberbots. They met the team leaders, Juan, Tanvi, and Oindree, who explained the 3 subteams. After talking about the design, mechanical, and software subteams, the team covered FRC and the subteams. After going over FRC, the team talked about the Business and Management side, as well as how students could try out for an FTC position. To finish off, the team played a Kahoot! with the students, and had a Q&A as well



FLL Kickoff

08.04.20 11:30am - 1:30pm

5

Presenters

30 kids attended

At the FLL Kickoff hosted by the Fremont High School Robotics team, kids were introduced to robotics for the first time. Through an interactive presentation, they learned about the foundations of robotics including about the game, competition, and project. Then, the kids were taught about the importance of core values and how they create a nurturing environment to learn. To put what they were taught into practice, the kids were put into breakout rooms to introduce themselves and create conversations with icebreakers. Next, the students were shown the 2020 kickoff video to give them an idea of this year's theme. Finally, we wrapped up by informing the families on what their next steps would be and giving them the link to a web series we made to provide more information about FLL. To keep the kids engaged throughout the presentation, they were given a virtual notebook to keep track of all the information shared during the event.

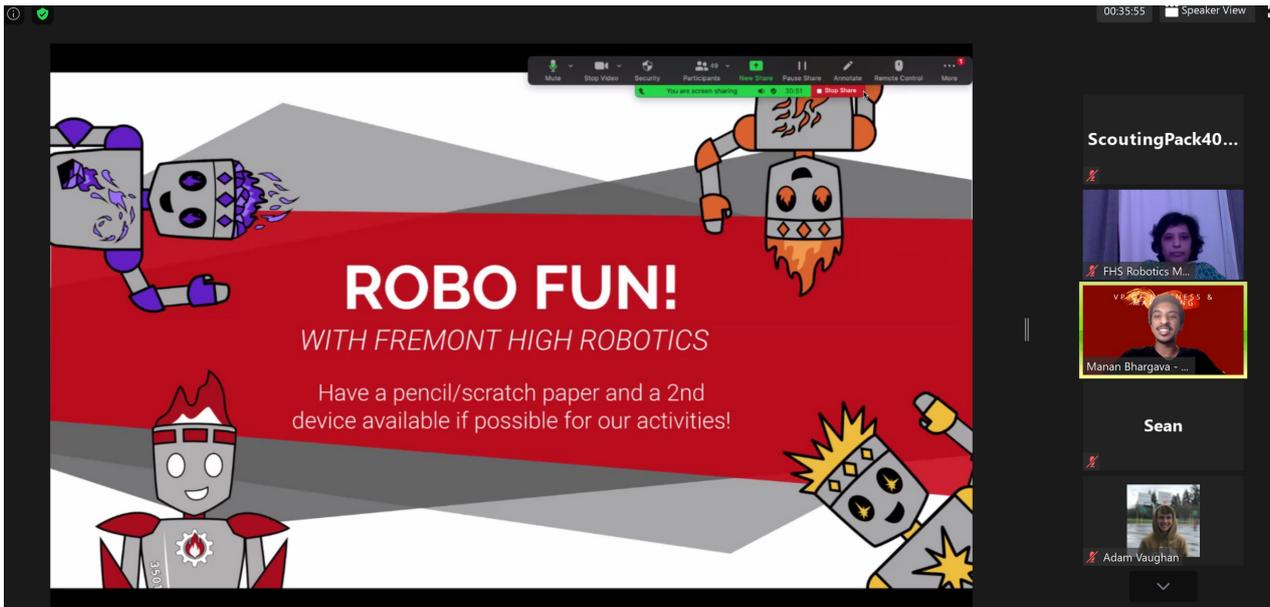


Library RoboFun

10.19.20 6:00-7:00pm

4

Presenters



50 kids learned about robotics

At the Fremont High Robotics' "Robo Fun" event, students brought a playful twist to the world of STEM and First Lego League. Through games such as Guess the Robot and dancing to the Cha Cha slide, students tied STEM to everyday things, giving them a way to interact with their surroundings. Children learned about how robots are similar to humans, giving them a way to learn the parts of a robot. Several children found the event interesting and enjoyable, and definitely learned a lot!

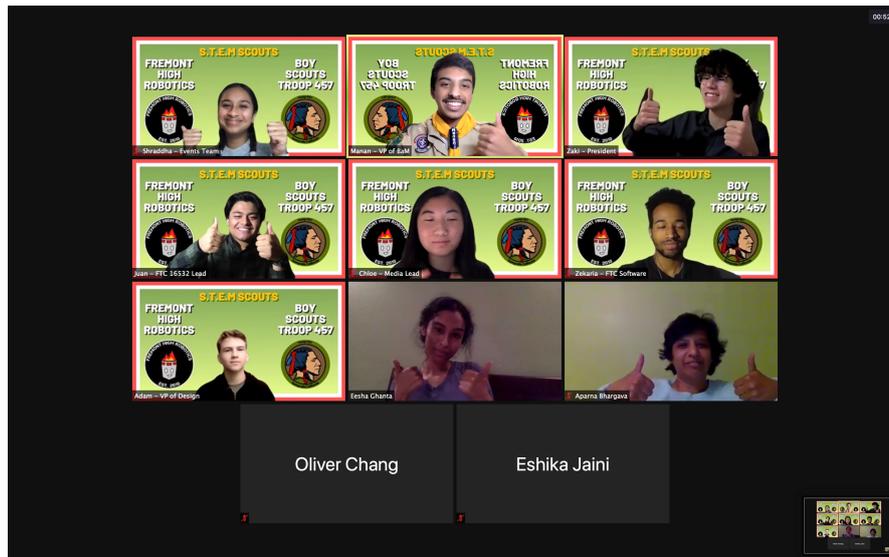


Boy Scout Troop 457 x FHS Robotics

11.12.20 5:30pm - 7:30pm

5

Presenters



55 scouts attended

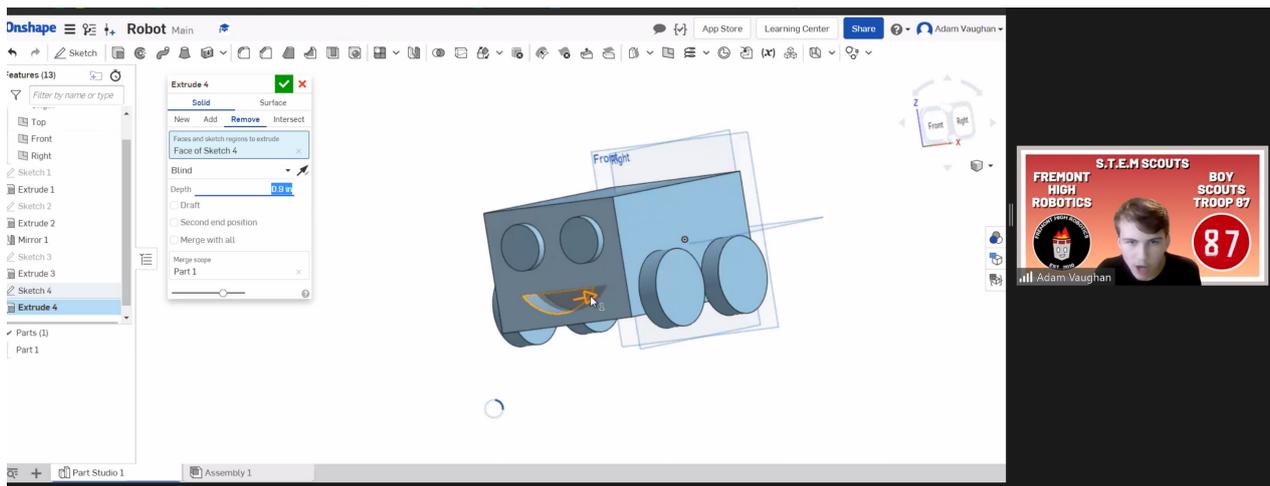
At the Fremont High Robotics' very first FTC event, the students teach scouts about robotics and how it's applicable in the real world. The events started off with FTC team, Emberbots, explaining the mechanical and software aspects of robotics as well as non technical aspects such as business and marketing. The event lasted for an hour with an interactive presentation that started off with identifying robots used in today's day and age for agriculture, fire rescue operations, and much more. Then, we transitioned into playing a game of identify the command as a fun way of showing the scouts how the robot follows the actions written in its code. Finally, we wrapped up with a live demonstration of the robot from the previous year by our VP of Software and a mini design workshop led by our VP of Design. During the workshop, the scouts learned the basics of CAD using Onshape and were excited to learn more. After the presentation, many scouts expressed their newly found interest in robotics.



Boy Scout Troop 87 x FHS Robotics

12.09.20 11:00am - 4:00pm

4 Presenters



15 scouts attended

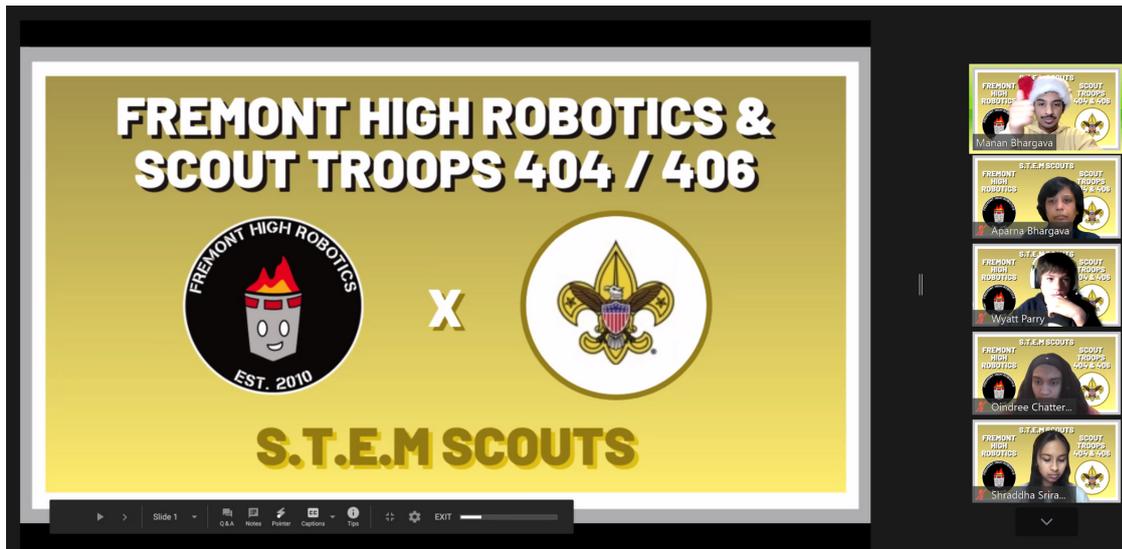
At the Fremont High Robotics' second Boy Scouts event, FTC team Infernrobots presented an informative introduction about robotics, covering the requirements for the Robotics Merit Badge to troop 87. The event lasted around an hour and started off with an explanation going over FIRST, FLL, FTC, and the subteams of FHS Robotics. We then transitioned to a game in which the troop attempted to figure out what action a written code is supposed to do. After that we showed a live demonstration of the robot from our VP of Software and a mini design workshop led by our VP of Design, with a mini game showing how robots are used in the real world in between. Finally we wrapped up with a description about safety in the robotics workshop and career opportunities regarding robotics. During the workshop, the scouts learned the fundamentals of robotics, got an introduction to the FIRST program, and learned the basics of CAD using Onshape. After the presentation, many scouts expressed their newly found interest in robotics and wanting to learn more about robotics.



Boy Scout Troop 404 & 406 x FHS Robotics

12.13.20 7:00pm - 11:00pm

5 Presenters



50 scouts attended

At the Fremont High Robotics' third Boy Scout event, one of our FTC teams, the Emberbots, presented to local Boy Scout Troops 404 and 406. The objective of this event was to teach the scouts about the basics of FIRST Robotics, play games, and also help them fulfill their Robotics Merit Badge Requirements. The Scouts learned the basics of FIRST, covering FLL, FTC, and FRC. The participants met the sub-teams of the Emberbots, learning about both the mechanical and the software sides. The Scouts also got a chance to look through the eyes of the 2019 Infernrobots robot. Later the team and the Scouts played Identify the Command, a game in which they looked at certain pieces of code, and tried to decipher what it was meant to do. They also played Robots in the Real World, a game in which they had to categorize robots into either Remote-Control, Tele-Op, and Autonomous. Then using Onshape the VP of design, Adam, led a mini design workshop where they learned to create a simple design of a 3 dimensional robot. Following the workshop, there was a recorded demonstration of the 2019 FRC robot. Closing up the team showed the troops what safety looked like in the Fremont High Robotics' workshop.. Finally, the troops learned about career opportunities in fields involving robotics and finished with a game of Kahoot and a Q&A.



Stocklmeir RoboFun

12.18.20 7:00pm - 11:00pm

5

Presenters

The screenshot shows a Zoom meeting interface. The main content is a slide titled "Decode the Secret Message" with the instruction "HAVE A PENCIL AND PAPER READY!". The slide features a grid of symbols and a secret message. The grid is as follows:

| | | | | | | | | | | | | |
|---|---|---|---|---|----|---|---|---|---|---|---|---|
| @ | β | © | ð | £ | f | μ | â | i | ç | ° | Ⓛ | ™ |
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| π | ∅ | ¶ | Ω | ® | \$ | † | ü | √ | Σ | ≈ | λ | Ⓢ |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

Below the grid, a timer shows 00:48. The secret message is: \$†£™ i\$ \$ü¶£® fütπ

On the right side of the Zoom window, a list of participants is visible, including Manan Bhargava, FHS Robotics M..., Eesha Ghanta, Priya Badri, and Lokesh Kodam.

120 kids attended

At Fremont High Robotics' second, "RoboFun" event lasting around an hour, elementary school students dived into the world of STEM robotics and First Lego League. We started off with a quick, fun activity, getting the students warmed up, where they decoded a secret message. We gave an introduction to what a robot is and the 3 FLL programs, Discover, Explore, and Challenge. Through games such as, 'Guess the Robot' and a dance to the 'Cha Cha Slide' students were able to learn how STEM related to everyday things in a simple way. They also got to view a real Robot demo and ask questions to the presenters. After the event, from a quick google form, we found that many of the students found the presentation enjoyable and that they had learned a lot!



STEM Workshop @ FLL Tournament

MM.DD.YY ___:___pm - ___:___

2

Presenters

PHOTO

15 participants

At Fremont High Robotics' Virtual FLL Qualifier, we hosted a STEM workshop for the attending teams. We started off with a fun decoding activity to show how robots decipher the code instructions given to them, then got straight to talking about what a robot is and what the human equivalents of different robot parts are. After going through a few examples, we held a Kahoot for the attendees to show them that robots are actually quite similar to humans. With the introductory materials covered, we dived into different examples of robots in the real world. Many of the students were excited to find out that many of their regular household items such as Roombas were actually robots! After seeing these examples, many students were excited to see how they could get more involved in robotics, so we went over a list of career opportunities involving robotics and other aspects of STEM before giving a brief overview of FRC to close out the presentation.



STEM Workshop @ FLL Tournament

MM.DD.YY ___:___pm - ___:___

9

Presenters

PHOTO

48 participants

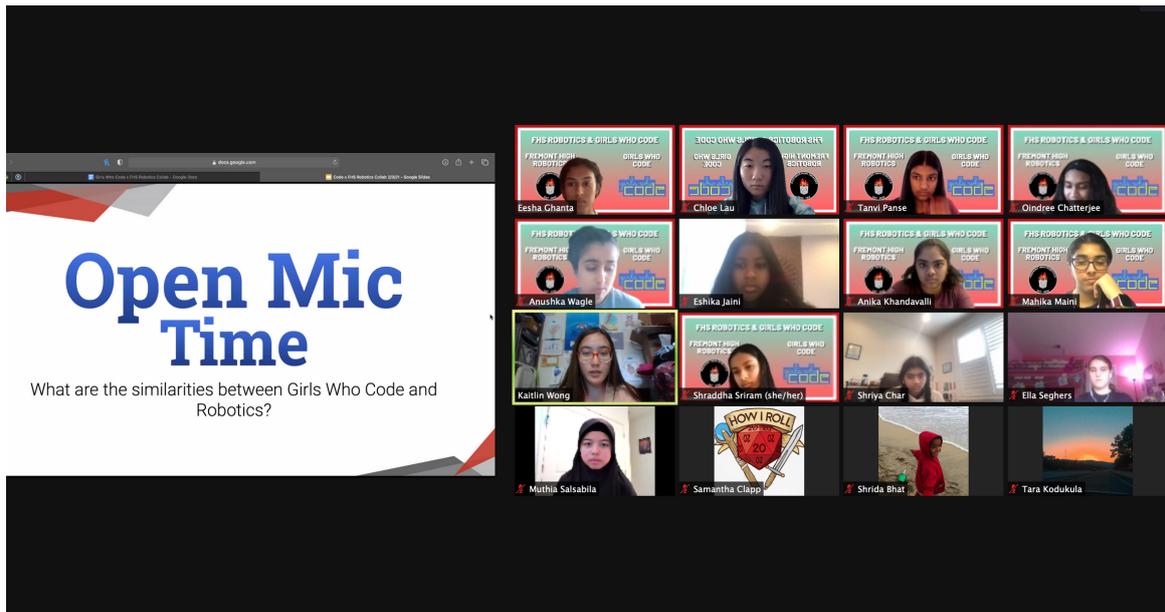
During our virtual FLL qualifier, two of our FTC teams held software workshops and demonstrations of their robots. The workshops first had a game called "Identify the Command" to introduce attendees to reading code. The game was a hit among attendees who said they enjoyed it and found it easy to follow. The presentation then switched to showing how our FTC teams are operating during Covid, followed by a robot presentation to finish things off. Overall, many of the attendees said they would be interested in doing FTC in the future.



Girls Who Code x FHS Robotics

2.3.21 2:45pm - 4:00pm

10 Presenters



14 attendees

At Fremont High Robotics' collaboration with the Girls Who Code (GWC) club, girls from the robotics team and the club came together to discuss experiences of being a woman in a STEM, a male dominated field. We shared the basics of robotics and our team, as well as how to join. The GWC club shared some background on their club structure as well. In various parts of the presentation, the girls paused and discussed our experiences in their teams, as well as the similarities between the club and team, our favorite part about robotics and coding, and more! The event was really informative as well as informal, and overall unique experience that all participants thoroughly enjoyed.

Outreach Summary

17

Events

517 Attendees

28

Presenters

23 New Members