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Monkey Business

News of the Funky Monkeys, Lynbrook High School Robotics, FIRST® Team 846

Editor-in-Chief
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The Big Switch

Adapting to a remote year.

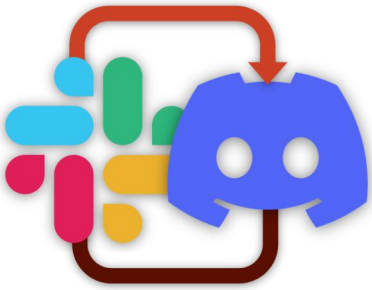
Swasti Jain (sr.)

As engineers and innovators of the future, Team 846 The Funky Monkeys, knows how to adapt to unforeseen circumstances; even when the circumstance is that all robotics competitions get canceled and we are all stuck at home due to a global pandemic. In this unprecedented year, many problems arose with communication and socialization due to the virtual setting.

"These virtual socials allowed us to bond despite not being together in person."

What's a robotics team to do without the very things that make us a robotics team? It should come as no surprise that our team found new ways to continue operating our team smoothly.

We decided to switch to Discord as our primary teamwide communication platform to make communication standardized. As we'd been using Slack for many years, making this switch was new territory for many of us. In order to make the transition seamless, we presented a live tutorial during our



Graphic by Swasti Jain (sr.)

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The Funky Monkey's submission for the Game Design Challenge.

Carnival's Calling!

Stepping up to the challange of designing our own build season game.

Cindy Chou (soph.)

Preparing for a challenge that the team has no experience in means a process full of doubts, questions, and confusion. This was the first year that FIRST Robotics launched the Game Design Challenge, but before we arrived at our final game idea — FIRST CARNIVAL — we had to learn how to work as a team and overcome the bumps along the process.

Although the team could only submit one game proposal, our game wasn't just one person's design but rather the entire team's. We incorporated ideas that were brought up during our long brainstorm sessions, building off each other's suggestions. For example, our main scoring element, the skee ball, originally came from a different game. From designing our field elements on computer models, to coming up with exciting and catchy names for them, we worked together as a team. And of course, we couldn't have done it without Mr. G, the mentors, and everyone who contributed their ideas and hard work to the game.

The suggestions made by our team members, many of whom were not even a part of the game design team, made a

"I am extremely proud of our Game Design team for working on this game entirely virtually and overcoming all the challenges along the way."

big difference as we created our game. For example, late in our game design process, Isha brought up that it's challenging for rookie teams to score, so we added a cornhole element where robots only needed to push balls up a ramp and into a small hole. Small details like this make the game inclusive and exciting for the audience to watch, and it was also de-

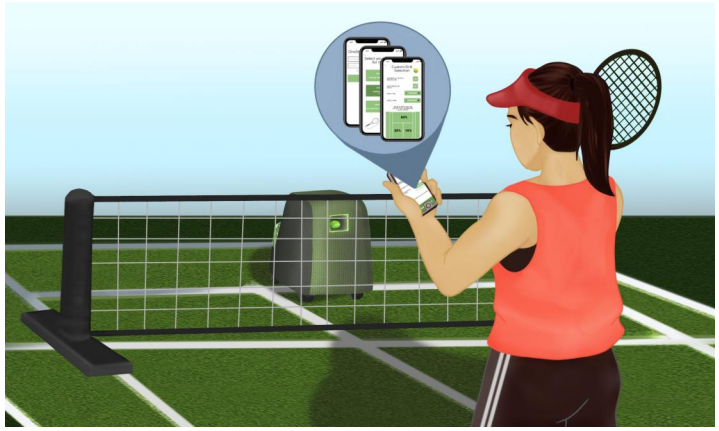
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The Big Switch *Continued...*

team-wide lunch meeting. I can confidently say that our efforts have been fruitful. Our communication has improved incredibly over the past six months; easily accessible voice calls and categorized channels allow us to organize our discussions and effectively communicate even in a remote setting.

Communication wasn't the only challenge we overcame; socializing during an at-home year was much different than we knew it. Years prior, our team would bond over team dinners prepared by our wonderful parent volunteers or chat after team meetings about possible design changes on the robot. All that was unavailable to us in a virtual setting so we had to find new ways to socialize. We quickly implemented online socials; we played popular games like Among Us and shared funny stories and jokes. These virtual socials allowed us to bond despite not being together in person.

As the future's engineers innovators, whether it is communication or socialization, it is our job to continuously strive for better. If there is anything The Funky Monkeys excel at, it is to anticipate and adapt to any and all problems that may arise.



The Funky Monkey's project for the Innovation Challenge. Graphic by Swasti Jain (sr.)

Let's Play Ball!

Funky Monkeys take on the Innovation Challenge with their project: OneShot

Arjun Kumar (jr.)

Since January, The Funky Monkeys have been working on the Innovation Challenge, a new "at-home" challenge for this year's FIRST Robotics competition. The challenge was to "identify a problem and design a solution to help people keep, regain, or achieve optimum physical or mental health and fitness through active play." This type of challenge — coming up with an idea and then creating a business model and design — was new for most of our team members

"Even with an innovative idea or a great technical design, you need a good presentation and a thorough business plan to succeed!"

We all worked together to brainstorm possible ideas related to keeping people active, fit, and moving. After coming up with several ideas, we broke into smaller groups to analyze the viability and feasibility of each idea, both business-wise and technically. We developed multiple projects in parallel because we wanted to make sure everyone had a chance to learn and get experience in business and the innovation process. Among our team, we presented the final set of ideas to each other and discussed which one we felt would work the best. After several rounds of research, development, and project validation, we decided on our project, a product consisting of a moving ball-shooting robot, an app, and a tennis racket attachment all working together to make tennis practice more realistic and engaging. We felt that this idea best embodied the prompt and was simply the most innovative. After we decided on the idea, we brainstormed a catchy name to describe our product: OneShot.

Developing OneShot brought in a lot of members from different areas of the team; we needed to produce an intricate business model, design the app interface and robot, and even create graphics. With the help and feedback of Mr. Amin and Mr. G along with the rest of Team 846, our pitch turned out to be far more polished and complete than I could have imagined when we first began.

In preparation for the judging interview, we spent hours upon hours prepar-

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Cheddar Chats with Team 846

Our Innovation Project, OneShot, is featured on Cheddar News

Ankith Madadi (jr.)

When we found out that we were selected for a live interview with Cheddar News for our Innovation Challenge project, we were extremely excited for this amazing opportunity to present our work to an audience across the country. Cheddar News is a national news network that focuses on covering the most innovative products, technologies, and services transforming the world. Cheddar has recently partnered with FIRST and created their Young Inventor Series, where they showcase a different FRC team's Innovation project each week. We are honored that we were one of the few teams chosen from all the FRC teams that participated in the Innovation Challenge by Cheddar News for this amazing opportunity.

"Looking back at this whole experience, everything we do on the team translates into experience for the real world whether it be working in a startup or on a robot."

The focus of the interview was our innovation challenge project, OneShot: a product consisting of a moving ball-shooting robot, an app, and a tennis racket attachment, aimed at making tennis practice realistic and engaging. In preparation for the interview on Cheddar News we reflected upon the goals of OneShot, the impact of FIRST on our futures, and how designing OneShot compared to

see **Cheddar Chats with Team 846**, *page 3*

Carnival's Calling *Continued...*



The team's Designer's Award received during the Awards Ceremony.

tails like this that the FIRST judges found impressive.

When we first began our interview, I was nervous and excited, even though we had spent long hours making slides and preparing responses in mock interviews. Our two judges, Jenny and Trevor, were enthusiastic and welcoming right off the bat, and they made it a lot less stressful for us to present our idea. Looking back, having a script written down and adding artistic elements to jazz up our presentation really helped us articulate our ideas. Once the presentation portion was done, I was proud knowing how much our presentation had improved compared to our first run-throughs. Before I knew it, our twelve minutes were up and we were thanking the judges!

The experience was just as amazing and worthwhile. One month after the interview, we found out that we were one of the four teams in the Bay Area to win the Designers Award, which was a huge accomplishment! I am extremely proud of our Game Design team for working on this game entirely virtually and overcoming all the challenges along the way.

Cheddar Chats with Team 846 *Continued...*

working to build a robot in a typical build season. Additionally, we met with mentors and went through a mock interview and practiced the articulation of our responses. The mentors also suggested tweaks to our camera setups, maintaining eye contact, and gestures to keep the interview natural.

Although we were well prepared for the interview, I still felt nervous about representing the team and FIRST to the public. As I heard the final countdown from the producer for the interview to begin, I felt anxious. However, during the interview, the excitement of being on TV, and talking about our project made the interview natural and fun!

Infinite Recharge 2.0

Working on remote challenges with our 2020 season robot

Andy Min (sr.)

It was a cold and early Saturday morning in January. Kickoff day... from bed. This year's unique season began at home as team members joined a call to watch the live stream together virtually. As we watched in anticipation for what was in store for our 2021 virtual season, I was excited to see our team together for a new season once again.

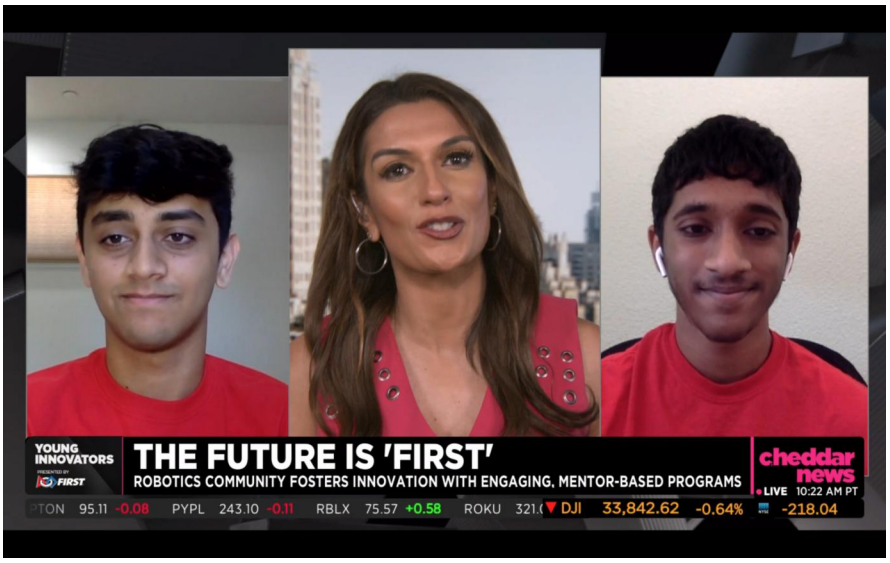
The 2021 season, Infinite Recharge at Home, was revealed to be an extension of last year's 2020 season. Involving five different challenges with a mix of quickly driving around racecourses, shooting balls into the goal, and picking up balls, I knew we had lots of work to do. After the robot and various tools from the shop were transferred to Sid's garage, we got down to business. Throughout the following two months, we were able to significantly improve our robot's software and hardware to handle all five challenges. Watching our robot's progression was extremely rewarding as we were finally able to see our robot's full potential after the sudden end of our 2020 season.

Once we got our robot to its peak performance, it was time to record the challenges. Admittedly, this was the most

"It was great to see the team collaborate and succeed despite the challenges of working out of a garage with limited resources"

frustrating part as we spent weeks recording take after take until sunset trying to improve our scores by even milliseconds. However, this was also the most exciting period as we saw our robot exceeding our initial expectations, especially in the shoot-

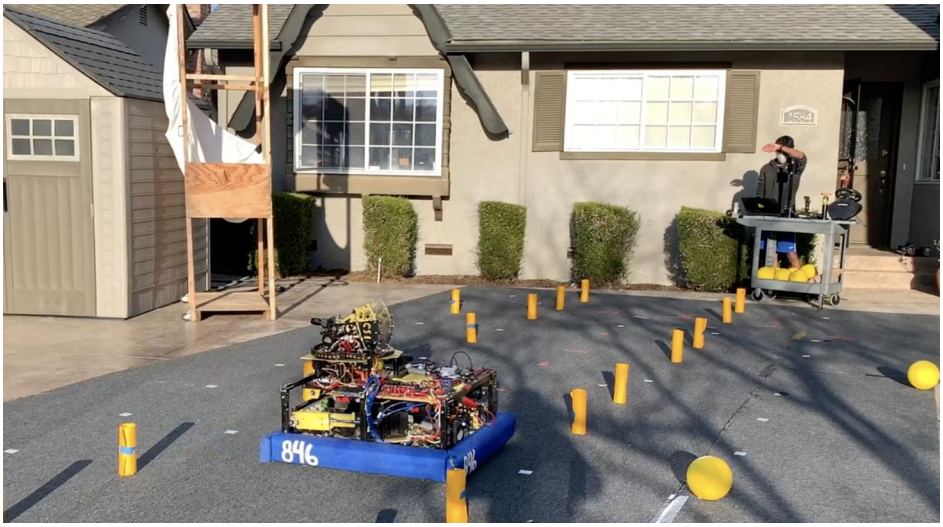
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Karan Parikh (grad) and Ankith Madadi (jr.) representing The Funky Monkeys in the Cheddar News interview.

When the interview aired, positive comments poured in about OneShot on social media after watching it, eventually amassing tens of thousands of views. Many people in the FIRST community had seen the interview and had very positive reactions. Even former professional football player, Victor Cruz, saw our interview and expressed his support on Twitter!

Looking back at this whole experience, everything we do on the team translates into experience for the real world whether it be working in a startup or on a robot. We are preparing to be the next generation of innovators, and this interview was an excellent insight to the impact that we, students, can have on the world with our work. I am extremely proud of the hard work and effort our team put into the Innovation Challenge this season, and seeing spread to a larger community through this interview was inspiring and eye-opening.



Students practicing for the Infinite Recharge @ Home challenges.

Infinite Recharge 2.0 *Continued...*

ing challenges.

Our two months of testing, debugging, and recording paid off as we placed 7th in the Silver group, consisting of 28 teams from around the world and noted by some in the community as the most competitive. Furthermore, the team earned the Autonomous Award for our work in autonomous path following, something I'm especially proud of as it was a project involving both veteran and newer members of software working together. It was great to see the team collaborate and succeed despite the challenges of working out of a garage with limited resources, and I can't wait to lead the team as we return to a traditional season in 2022.

Let's Play Ball *Continued...*

ing slides, practicing our speaking parts, and answering every hypothetical interview question we could think of. This process was tedious but gave us confidence in our abilities to do well for the interview. On the day of the interview, I was pretty anxious. However, due to our extensive preparation, the interview and presentation zoomed by pretty quickly and finished as planned. When the Q&A portion came around, we all gave well-thought-out answers to the judges' questions; we were able to showcase our detailed work through many supplemental slides and graphics we created in anticipation of additional questions.

Although earlier this year we found out our team is not moving forward as semi-finalists, I feel proud of everything we accomplished. Coming in, I knew so little about business and by the end of it all, I learned how various different components of a company such as costs and revenue models all come together. Beyond that, I also learned how to deliver a concise and detailed presentation, highlighting the key points of our product and its design. Even with an innovative idea or a great technical design, you need a good presentation and a thorough business plan to succeed!

The Innovation Challenge was a valuable experience, both personally and for the rest of the team, and we hope to have more opportunities like it in the future.

Where Can You Find the Class of 2021?

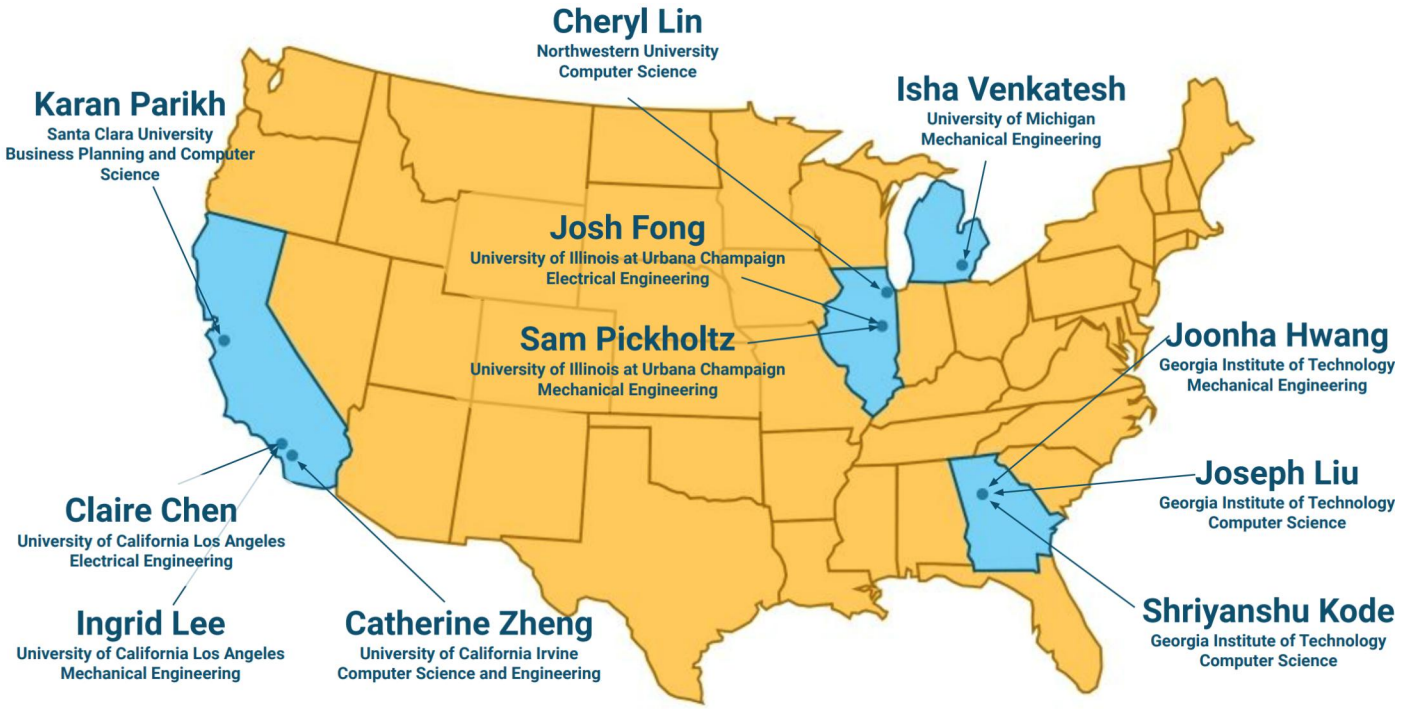


Image by Swasti Jain (sr.)