

ROBO COMP

Building robots provides real-world engineering for students

Meghan Pottle | Staff Writer

One small step—or roll—for robots, one giant leap for aspiring engineers.

A program called FIRST (For Inspiration and Recognition of Science and Technology) engages young people in mentor-based programs to help build their engineering and science skills. Middle school and high school students are able to start a FIRST Tech Challenge (FTC) team in their area and build robots to enter competitions.

Seniors Nick Zhao, Nayonika Banerjee and Michael Crawshaw are a part of a FTC team called Infinite Resistance, with a total of 10 members that attend schools in the Cincinnati area. The team gets together two times a week with meetings that last anywhere from two to four hours.

“It’s basically a group of kids who come together and we build and design robots for specific challenges that we are given at the beginning of the year,” Banerjee said. “Our season starts in September and basically we just design a robot that has to fit in an 18x18x18 inch block or cube. We design it to a specific game and this year’s game was Cascade Effect where we had to pick up balls, do a bunch of other things, place the balls in tubes, and roll tubes up ramps and that stuff.”

There are different levels of competitions that each team must go through to get to the world championship in April. If the team does well at regionals, they move on to the state competition, then the super regional competition, and finally, the world championship.

Zhao has been a part of Infinite Resistance for five years and usually goes to five competitions a year, not including scrimmages.

“At the world championship, there are 128 teams and that’s because it has been narrowed down,” Zhao said. “We have been to the world championship three years and we have never won it,



A photo of Infinite Resistance at the 2012-2013 Ring It Up.

but the best we have ever done is semi-finals.”

Banerjee made an early decision to commit to Virginia Tech and plans to major in mechanical engineering because of the engineering skills she learned from FIRST.

“From FIRST, I have learned to work with the team for really long amounts of time and it’s a lot of working under pressure during competitions, which is great because in the real world, that’s something that you have to deal with,” Banerjee said. “Also, it showed me a lot about the engineering process.”

Banerjee said being apart of Infinite Resistance has helped her learn to be a part of a team, which isn’t something she is used to.

According to Zhao, he has learned a lot about engineering from FIRST, but the majority of the things he has learned are not science related.

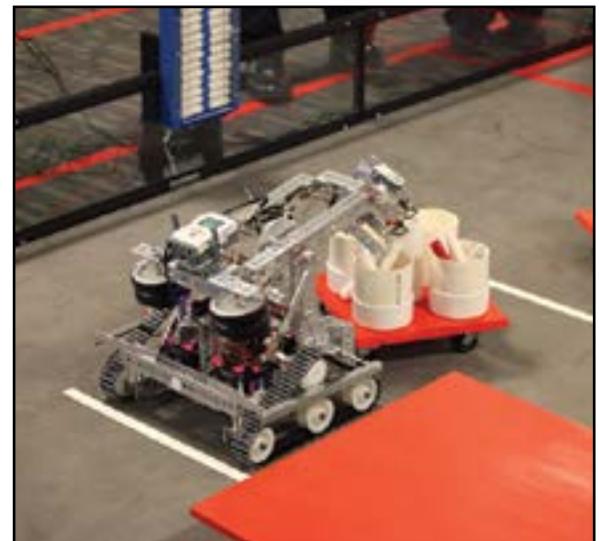
“It taught me a lot about how to communicate with other people and dealing with different interests or conflicting interests,” Zhao said. “I learned a lot about how to manage things because it’s a team of people just like me and each person has their own role, but you need to make sure everything else on the team is running smoothly.”



FTC team Infinite Resistance at the Cincinnati FTC Regional Qualifier.



A shot from the Central Ohio Qualifier.



The group’s “Get Over It” robot.

Photos contributed by Jay Zhao