

Robotics Club goes outside to test one of their new ball-launching robots. Their hard work pays off when the robot successfully shoots a ball into the air.



The trial of the ball launcher, christened "No Points" by Robotics Club members, brings excitement to the group as it launches a ball into the air.

How It Drives

Radio Relays information to the roboRIO over Ethernet

Sends joystick information and receives robot information from the radio wirelessly

Driver Station

Motor Controllers

Controls the voltage supplied to motors using commands from CAN (Computer Area Network)

12v Batterv Powers the robot

RoboRIO The robot's computer. Receives information from the radio, relays commands to motor controllers over CAN.

Motors

supplied

Turns the wheels;

based on voltage

speed varies



The robotics team loads their new T-Shirt Cannon. They prepared to test out the abilities of their new creation.

Four wheels rotate independently, with smaller wheels attached at 45 degrees that enable movement on two axes.



Mecanum Wheels

though. After competing in the contests, club members get to play around and create any robots they want.

"It's just completely different from what you'd get in any other classes," Devin Scarisbrick '24 said. "You can pretty much do whatever. It's really creative."

The robotics club's newest project is their T-Shirt Cannon. The group worked together for two months to create an exciting experience at sporting events and help the club gain new members.

"It was started a few years ago by seniors who have long since graduated," Kugler said. "Last year we started to work on it because we weren't competing, so we rebuilt it." Robotics Club is not just about the materials given or the time allotted. It's about the teamwork. Members focus on their respective components of each

creation, tailored to their areas of expertise. They communicate through text to make sure every part of the robot is functioning properly.

"It's hard to solve the problems individually. You need many people to solve the problems that we experience through the creation of our robots," Kugler said. "Robotics makes me a more efficient and productive communicator."

makes things easier.

"It helps me branch out and talk to many different people," Kugler said. "You can't solve a lot of problems on your own." For the members of the club, robotics is a place of comfort; a place where they can

20 The Mix



After loading up their T-Shirt Cannon, the robotics team watches as the T-shirt soars through the air. They have successfully created new robot.

What is a Drivetrain?

Two sets of wheels linked by belts; allow for different wheels to be used like pneumatic wheels, which can drive on more surfaces.

Tank Drive

The club teaches high school students valuable life skills that will come in handy later on. Students bond with one another and learn all of the different ways that teamwork

connect through their shared interest and creativity. This is why they often stick with it for their whole high school career.

"I took Mr. Stalter's Intro to Engineering class when I was a freshman, and I really enjoyed it," Kugler said. "I just like working with my hands and like trying to solve things. If something doesn't go how you want it to, you think about different ways to fix it."

With the number of people putting their hard work into creating a robot, the project gets done more quickly, and along with it comes the rewarding feeling of a job well done. Now they have several functional robots and new, invaluable bonds with their teammates.

"We built the T-Shirt Cannon because it's cool, but also because it shows people the cool stuff we actually do," Kugler said.