Our team is built on the foundations of diversity and inclusivity, fostering an encouraging environment for people, regardless of who they are or their level of robotics knowledge, to come together and learn and have fun. We’re a group of people passionate about changing the world through technology, working together, and uplifting others in our community to pave a path for a better future. That’s what “Girl Powered” means to us, and it’s an integral part of who we are as a community. Having an array of individuals from various backgrounds who have a wide range of interests is vital for change and progress as well as our growth as a team, and we’ve stuck to this idea by encouraging anyone and everyone to join our club. We have not only engineers and programmers, but also artists, mathematicians, and entrepreneurs who seamlessly work together to ensure our club’s success in the technical, administrative, and financial aspects. We have people of different cultural backgrounds, genders, ages, and skill levels, bringing new ideas and perspectives to every meeting. Each member plays a vital role in our team. Through this diversity, we’ve been able to approach challenges with open minds, listen to multiple perspectives, develop unique and innovative solutions to problems, and build a community for anyone and everyone interested in robotics. Our club philosophy is built around these ideas, and we see the strength of “Girl Power” firsthand every day in our robotics community.

Here at Herricks Robotics, there are no requirements to join the team. Therefore, we do not discriminate. We accept anyone interested in joining Herricks Robotics, whether the member is interested in coding the robot, building the robot, or designing the robot. The unique thing about Herricks Robotics is that we still encourage people to join the club even if they are not interested in working on the actual robot. They have the option of helping to manage the club instead of working on the robot. Some club members help the club function by creating commercials to promote our events or organizing fundraisers to raise money for our club. That is why we accept anyone interested in “joining Herricks Robotics” and not “interested in Robotics.” We believe the importance lies in the members’ enthusiasm for the club. We tailor everyone’s experiences to their interests to ensure everyone receives a task that they enjoy. Therefore, Herricks Robotics is a group that consists of people with diverse interests.

Our Presidents, Vice President, and Team Leaders here at Herricks Robotics also spend their free time preparing lessons for our members. We believe that the lack of knowledge or skills in the art of robot creation or function should not be a reason why someone does not want to join. As long as they are interested in learning, then welcome to Herricks Robotics! It is as simple as that. The board members of our club teach these lessons to some of our members who want to gain more knowledge about the different aspects of robotics who may have no experience in robotics before. Currently, one of our Presidents and our Vice President are teaching CAD lessons to our members. Here, we believe that anyone can join whether they have no experience in this field before or they have multiple years of experience.

Every member of the team has contributed in one way or another. In our team, we try to expose everyone to various facets of robotics whenever we can. This year, the coronavirus pandemic has stopped our engineering process. However, we still wanted to allow members to interact and work together. So, we chose three different online challenges to work on. We decided to do the VRC Girl Powered Essay Challenge, ‘Thinking Outside the Box’ Photography Challenge, and the VEX Robotics Competition Website Challenge. We asked each member to submit their photo challenge submission in late November to review submissions. On the other hand, the entire team worked on the website challenge. We split the challenge into two teams - one for designing the website and one for programming the website. On the design team, we have Haritha Lakshmanan, Preethi Krishnamoorthy, and Maanav Savani. This year, two of our new team members, Benjamin and Hamza, participated in the programming process along with Wafiq Khondkar. Some members helped on both teams such as Sanay Shah and Aneek Patel. For the engineer girl essay, we have Haritha Lakshmanan, Preethi Krishnamoorthy, and Irene Shao who worked on completing the essay. Given that several members are juniors and seniors in high school, we tried to allocate work to not burden any members. We also tried to help members learn how to step outside of their comfort zone and learn new things. Many of the members who helped code the website watched tutorials and videos on how to incorporate elements such as a picture carousel and a website banner. Our design team also looked at several websites for reference and collected data from the different teams. Overall, our team tried to give members the feeling of being in robotics, even if they were at home.

The diversity of our club and the different perspectives we bring to each meeting has greatly shaped our robot design in numerous ways. Everyone on our team has a unique background in robotics and technology. We use what we have learned to work together and come up with an effective solution to that year's challenge. For example, in challenges where we have to build a lift to place a cap on a pole, we drew on real-life experiences we had with mechanisms similar to those we wanted on our robot. Initially, after building a six bar lift, and realizing it wasn’t strong enough to pick up a cap, one of our team members suggested an explanation for this problem: we were only using two motors at the pivot point of the arm, making it difficult to lift it, and that was when we began to understand the concept of torque. After that instance, we covered torque in our physics class, gaining a better understanding of the physics behind building a robot. That was when we decided to go with a pulley system to lift the cap. When figuring out how to build an intake mechanism, another member of the team suggested materials to use for better grip as well as optimal materials to use for the robot to make sure it’s fast enough without falling over when extending any intake mechanisms. These decisions were driven by discussions regarding design from different perspectives. Through talking through different plans, we’ve been able to come up with unique and effective robots.

Although Herricks Robotics is a large group, everyone gets along together swimmingly. This is most likely due to the diversity of personalities found in the club. Even if you are shy and soft-spoken, one of our more extroverted members will come up to you and get you talking and feeling more comfortable with the rest of the club. Some of our members enjoy bringing up unusual topics which often results in the whole club laughing with them. Other members are more kind-souled so they sometimes bring homemade treats for the other club members to give them energy while they are working on the robot. The diversity of personalities in Herricks Robotics only resulted in an entertaining and engaging atmosphere that affected every single one of our members, improving our team chemistry. Our ability to succeed has been due to the many discussions that we have within the team. These discussions allow chances for our members to express their opinions and for new ideas to manifest which helps to come up with a solution whenever we stumbled upon a problem. These discussions are a vital part of our success because it helps to brainstorm ideas that would make our robots better, eventually leading to the success of the team.

Indra Nooyi has been a role model for many young girls throughout the years. Being the first-ever PepsiCo female CEO has inspired many girls who hope to enter STEM in the future. As a multicultural team that has many female members, our team could not help but be motivated by Indra Nooyi. "Whatever anyone says or does, assume positive intent. You will be amazed at how your whole approach to a person or problem becomes very different." We try to incorporate this into our team as much as possible. Even when we hit a roadblock, we make sure to approach everything with a growth mindset. When our arm mechanism would not go up, we ended up taking a video of it. After looking at the video, we were flustered, realizing that the gears were getting chipped and were skipping over each other. However, we tried to keep calm and maintain a positive attitude. We were ultimately able to fix the arm mechanism and we try to maintain this optimism in everything we do - regardless of the situation we are in.