97101G

“Girl Powered” All the Way

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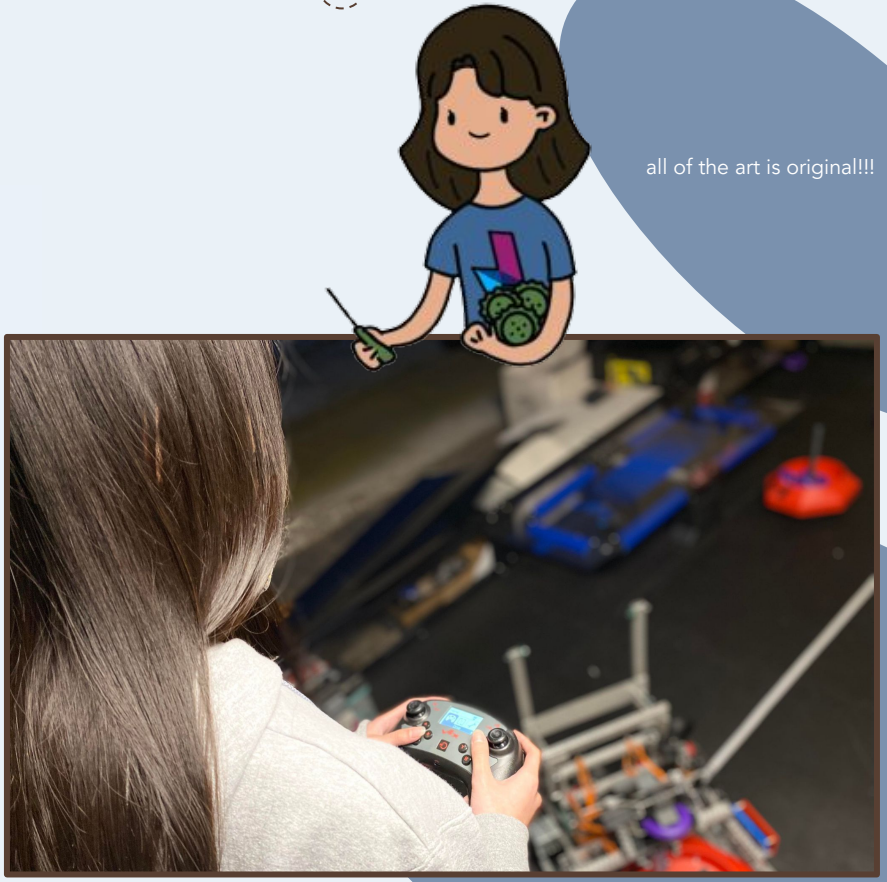
Girl Powered From the Start

"Girl Powered" is a phrase that has permeated every stage of our team's journey, from conception to today. Just a few years ago, we noticed a significant opportunity gap in robotics for the girls at our school. While there was plenty of interest, most girls in STEM classes or with exposure to STEM outside of school were discouraged by the demographics of the existing robotics teams.



all of the art is original!!!

Formation of Our Team

That's why we founded an all-girls VEX robotics team to specifically target girls at our school and offer them opportunities to develop skills they might not have considered as viable before. We are the definition of "Girl Powered": girls taking initiative to find a place for themselves in the world of robotics and STEM and creating opportunities for other girls to contribute their own perspectives and talents. Our goal isn't exclusivity, but rather creating an equal playing field. We take pride in both our robotics skills and the efforts of our team to offer other girls the opportunities to develop their own abilities.

Our Inspiration: Mary Jackson

Our team was built on the idea that we needed to take control of our education, create opportunities for ourselves and, most importantly, extend those opportunities to other young girls interested in STEM. It's a mission statement that defined the life of NASA aerospace engineer Mary Jackson, who broke barriers for women in engineering in the 1950s and eventually managed the Federal Women's Program.

Despite already having a position doing mathematics, she studied to pursue her dreams by obtaining another degree and entering a field previously closed to her. She knew what she wanted to do: become an engineer to test the rockets bringing the next person to space. Her tireless dedication to her passion and work are values our team strives to embody every day. And just as she opened the door to women in engineering with her work for the Federal Women's Program, our robotics team recruits girls from our school to ensure everyone has a chance to explore robotics. Mary Jackson's legacy as an engineer, trailblazer, and leader paved the way for us to form our team and be a part of the robotics community today.


we promise we are all smiling in this picture
Sanjana Mohan: Builder
Carolin Pan: Builder (Captain)
Kunjal Purohit: Builder
Nivedita Kamath: Builder
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Meet Our Team!
Tiffany Chen: Programmer
Justine Chu: Driver
Meryl Mathew: Strategist
EAGLEPRIDE

Recruitment

Our team welcomes all girls. No other criteria. No previous experience required, just a strong interest in robotics and an open mindset. We believe that the most worthwhile learning does not come from abundant knowledge and experience; rather picking up the pieces and figuring out how to put them together in itself is a process that allows room for a considerable amount of growth. Our primary goal is not necessarily to win Worlds (though it would definitely be nice!). Our main focus is aimed at providing interested girls at our school an opportunity to explore the world of robotics themselves. We don't need a trophy—bringing girls who never thought they had a chance in robotics into this field is winning enough for us. So our team attracts girls of all backgrounds, ranging from those who have been on competitive robotics teams since seven years old, to those who have hardly even heard of robotics before. Together, we form an inclusive, diverse, and supportive environment where we help each other grow.

Outreach

We also wanted to share our passion for robotics with younger students, so our team founded a chapter of the International Robotics Honor Society (IRHS) at our school. Through this chapter, we were able to reach out to local elementary school students by offering multiple sessions of virtual STEM classes taught by members of our team. We also hosted a VEX workshop during the summer to teach kids the basics of building and programming. By creating an inclusive environment for so many young girls and boys to experiment with VEX, we hope to inspire them and help them to develop their passion for robotics.

VEX workshop

Roles

Build/Notebook

Our build team designs and constructs the robot based on the capabilities suggested in our game strategy.

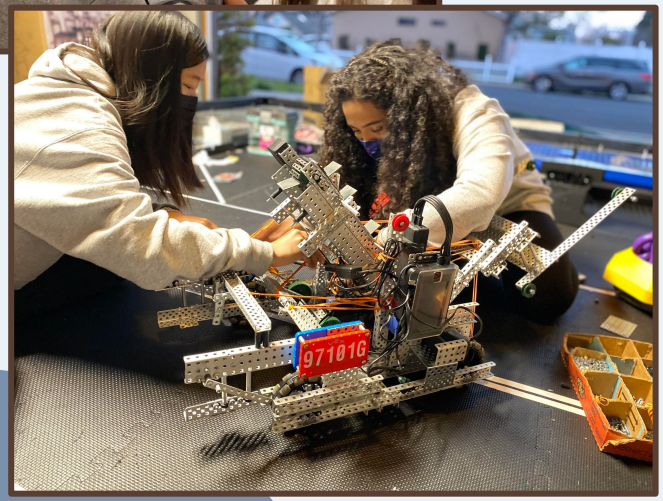
Program

Our program team writes the code for drive and autonomous and makes sure that the robot functions efficiently.

Drive/Strategy

Our driver and strategist study the game design and work together to implement and adapt the best game strategy during matches.

Our team consists of 7 girls who all contribute to either building and compiling the engineering notebook, programming, or driving and strategizing for competitions. At the beginning of the season, each member is assigned to a group consisting of 1 to 2 other members and contributes most of their time and effort to their respective roles.



Teamwork

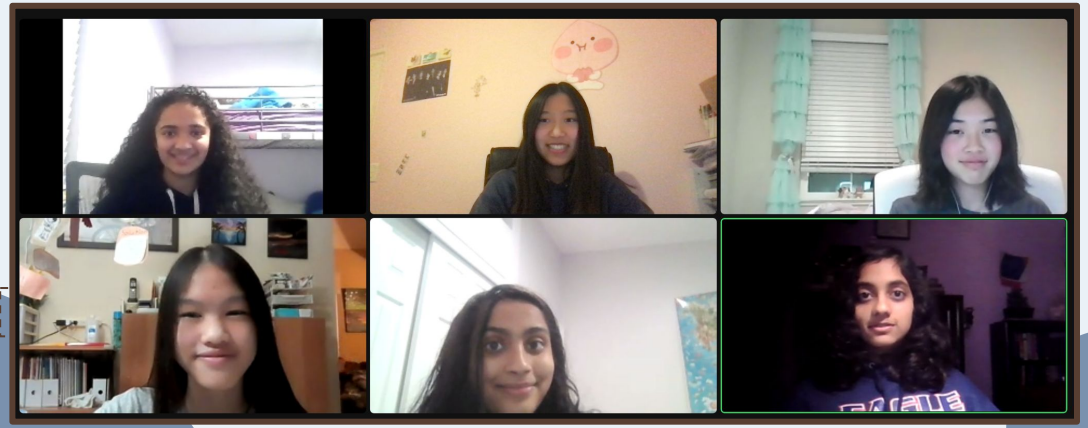
However, we found out that some members expressed interest in other roles as well and we realized that we work more efficiently when team members are not limited to their given roles. Through our collaboration, we are all able to build up each other's teamwork, communication, and leadership skills. Our team heavily emphasizes teamwork and working together. Our members, each with her different area(s) of expertise, work together to combine our best skills and create a well-rounded product.

Diversity of Perspective

Although our team is only composed of girls, we greatly value diversity of thought, so we welcome and encourage all ideas regardless of how far-fetched they may sound. At certain stages of our building process, our build team struggled to find a solution for the challenge of our gears not having enough torque to go up the balance. After hours of practice with the robot, our driver, one of the youngest members of our team, suggested changing our robot's back wheel motors to the only two stronger red motors we had. We initially believed it would be too difficult to implement due to the different speeds of the motor types. Despite the challenge, our programmers collaborated with the rest of the team to ascertain the exact speed values for the code and placement of the motors to successfully synchronize all four wheels and allow for easy ramp climbing along with smooth motion.

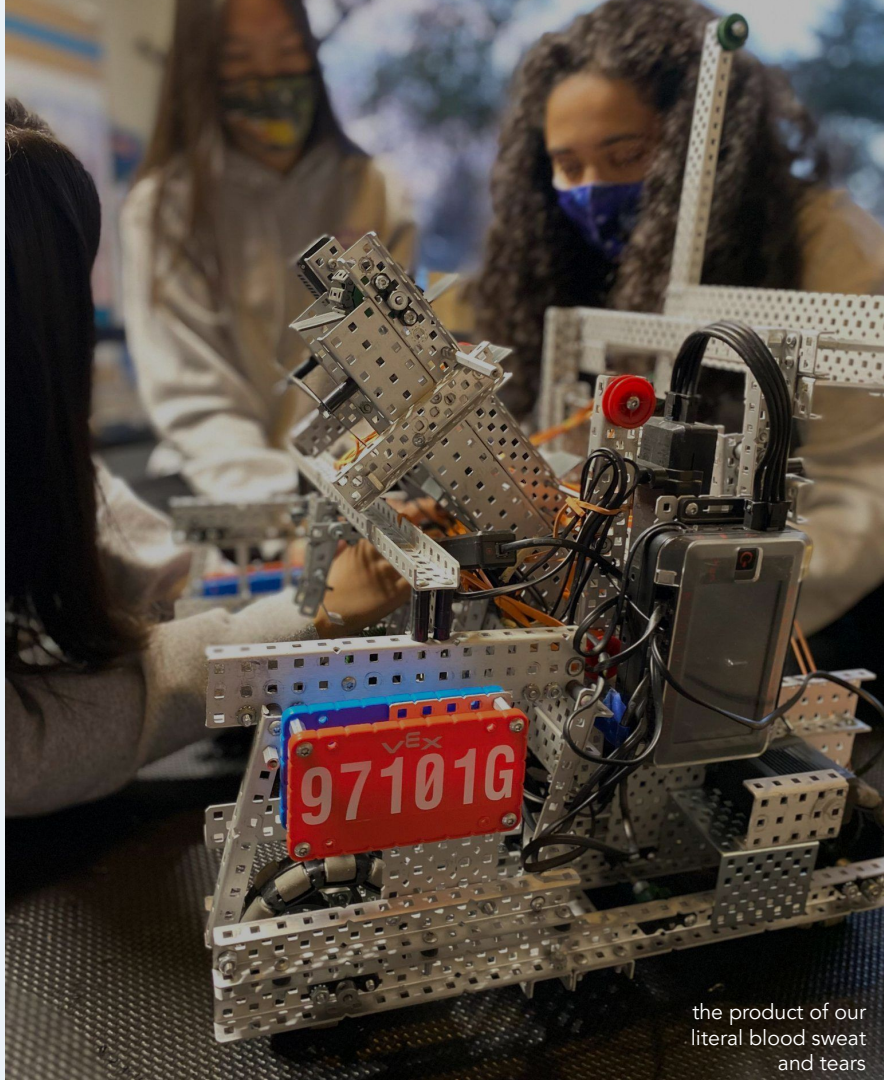
Team Chemistry

At our meetings, we take on tasks to improve our robot design and strive to make the process rewarding both educationally and recreationally. While building our foundations in robotics, we also take the time to understand our team members personally. Over the season, through our time in meetings and competitions, our team members have also been able to bond with each other and make new friends. Through teamwork and cooperation, we can make the most out of our collective experiences, diverse mindsets, and various approaches to further our success.



Our Robot

After much collaboration and hard work, we are proud to present our robot!



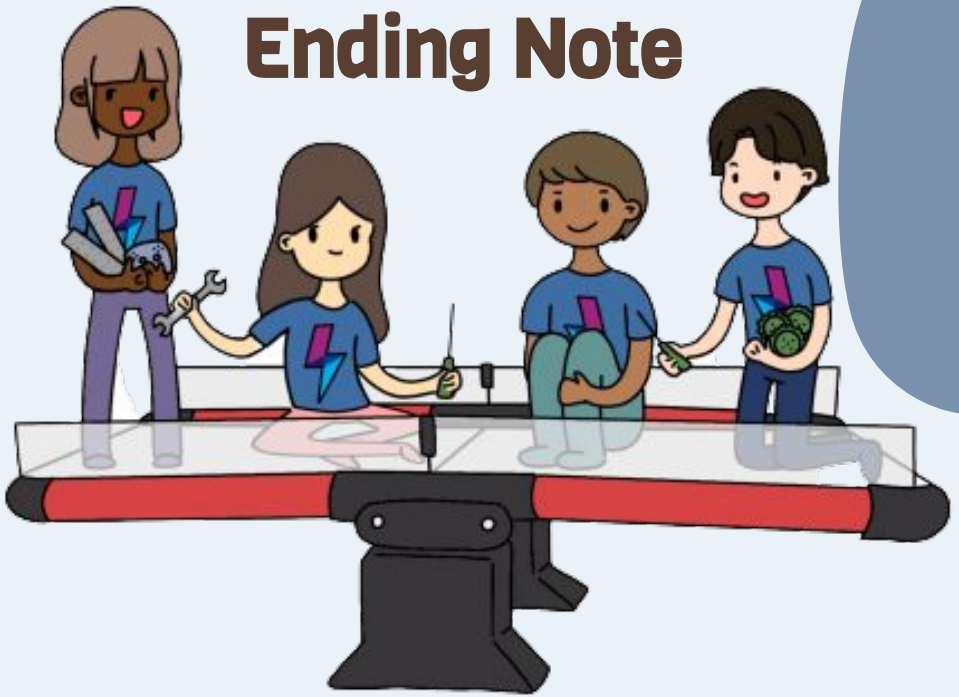
the product of our literal blood sweat and tears

Off to Competition

With that, our team and robot are off to competition. We always try our absolute best at competitions by staying optimistic and supporting one another. Throughout our season, we have seen major improvement in our performance, and that keeps us motivated to continue striving for excellence and empowering girls.

thanks for reading all that
~ 97101G

Ending Note



97101G's ultimate goal is to balance the scales of gender inequality in robotics, so that every young girl and boy interested in STEM has the chance to see a future for themselves and build towards it.