

# GIRL POWERED

Tustin, California  
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Team 393Y

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# THE FEAR AND INSECURITY WITHIN



The fear of rejection and thought of not being accepted almost prevented me from reaching my potential. However, through experiences on a VEX Robotics Competition team, I learned that not everyone falls into the same basket and that inclusivity is more attainable than I imagined.

Since elementary school, I have heard whispers of boys being better than girls in many things. It started on the playground, continued on the sports field, and even leaked into the classroom. I was hesitant to participate in many, so-called “male dominated” activities.

One example was when I quit playing basketball. My older brother is a star basketball player. He and his teammates were so fast, could shoot the ball from half court, and understood the game well. Meanwhile, I was barely strong enough to make a free throw and couldn't even make layups consistently. I foolishly thought basketball was a boys-only sport so I stopped playing.

Last year, this fear and insecurity made me doubt whether I should apply for my school's robotics program. Just like basketball, there were so many boys in robotics. Girls were outnumbered 10:1 and I almost gave up before I even started.



Then I was reminded of a near tragic moment that impacted a family friend. At 15, he was diagnosed with a rare bone cancer. Things looked uncertain and survival was not guaranteed. But he never gave up and beat the odds. A near tragedy turned into victory.

This was the first time someone I knew was facing death and it reminded me life was too short to let fear be an excuse. I ended up applying and was accepted into Team 393Y. It became my mission to prove that girls can thrive in STEM too.

Here's the story of how "Girl Powered" changed my life, from the

perspective of **the ONLY GIRL**  
on a nine-person team.



one team member not pictured

# GIRL POWERED: GIRLS AND BOYS ARE CREATED EQUAL

Girl Powered is an initiative bringing light to gender inclusivity within a STEM environment. It means that women are able to succeed equally in the same workplace as men. Our team's approach to robotics is shaped by these ideas, creating an inclusive environment for all. That's the key part some miss - **an inclusive environment for all**. Some mistake "Girl Powered" as girls being better than boys or that girls deserve more of a chance, but that would serve the same gender bias that we are all working to reverse.

To me, "Girl Powered" means having the courage to shine as an underrepresented female in STEM and being embraced by the VEX community not because "she's pretty smart for a girl" but because of my overall contributions, regardless of gender. It is the bravery to take a step forward even though it might be uncomfortable. It is an environment where girls of all ages, ethnicities, and perspectives are welcomed to work together. It also means I get a chance to inspire future generations of girls to not be scared and to pursue their STEM dreams.



"Science is not a boy's game, it's not a girl's game. It's everyone's game. It's about where we are and where we're going."

- Nichelle Nichols



# DIVERSIFY TO UNIFY

"Man may have discovered fire, but women discovered how to play with it."

- Candace Bushnell

Team 393Y is made up of eight boys and one girl. We have team members from India, Korea, China, Europe, Indonesia, and America. Inclusion allows teams to thrive. When everyone feels their ideas and contributions are respected, it creates an environment where people are engaged and motivated to succeed.

Every decision we make gets discussed by the team. We weigh our options, allow team members to work on their ideas individually first, then regroup to vote on how we should proceed. This allows everyone to be involved. Without an inclusive environment, I would feel intimidated, shy, and not add anything helpful to the team. Inclusivity also encourages everyone to try new things including roles they otherwise would never consider.

My friend was saved by doctors and nurses of all genders, ages, and backgrounds. Everyone at the cancer center worked together in various roles to accomplish their overall mission - build the best outcome all together for their patient.

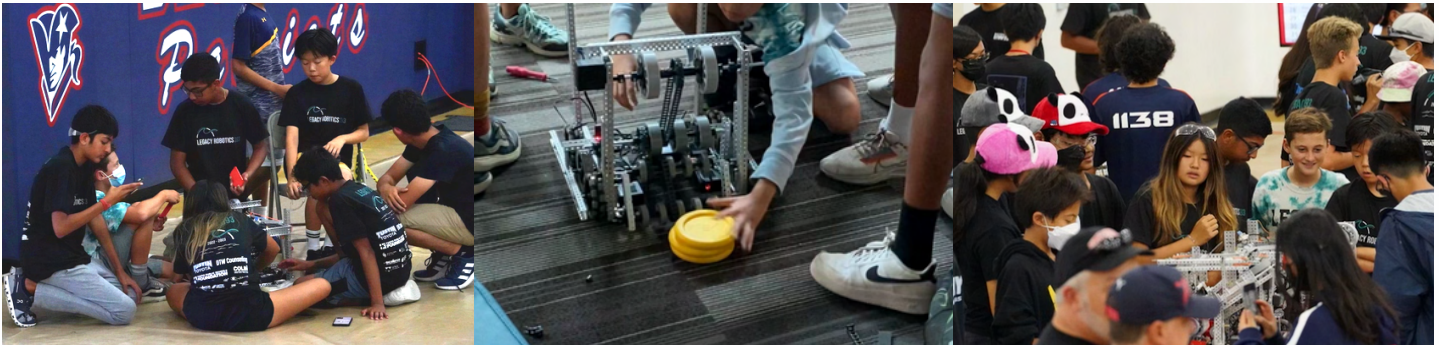
That's what we try to do here in Team 393Y. We encourage each other to try different roles to recognize strengths and weaknesses while also giving each person experience in designing, building, driving, programming, and strategizing. This allows the robot to be represented by each one of us, building the best outcome all together for our team.



One team member, Joowon, knows he's great at scouting. He is comfortable in that role, but after encouraging him to try other roles, Joowon discovered that building was also one of his strengths. By experiencing a new role on the team, Joowon ended up becoming our main builder.

Another member, Kaveesh, was comfortable with building, but as our team challenged everyone to try other roles, he became intrigued with programming. Kaveesh learned how to create code for our robot, helping Team 393Y program multiple subsystems.

We learned that trying various roles leads to more confidence, deeper understanding, and better team unity. It also encourages diverse perspectives, strengthening our communication skills and overall robot build.



Diversity in perspective has a significant influence on our robot design and team chemistry.

The intake, for example, was the most highly thought-out subsystem. Our main builders needed ideas to create an effective intake. We asked the team for different perspectives and Aziz, our main programmer, suggested we add matching gear ratios so that our intake could maintain a constant flow of speed. Meanwhile, Shaan recommended we give our intake its own motor as opposed to sharing a motor between the intake and roller. This would result in much more power for our intake.

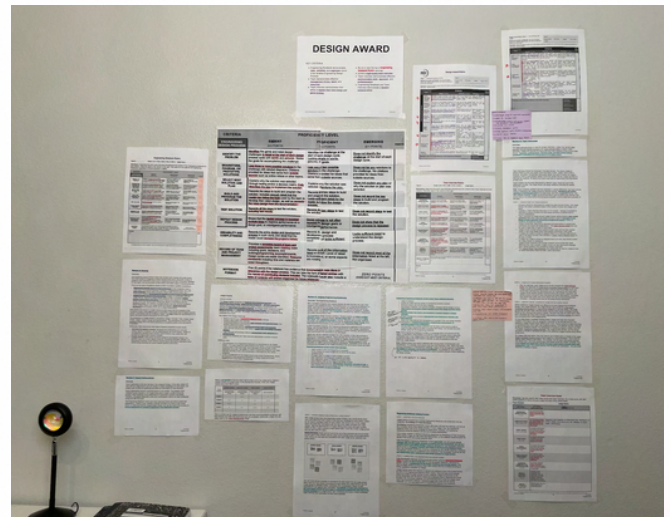
When our team incorporated ideas from different perspectives, we were able to take both suggestions from Shaan and Aziz, and add them to the intake for a more efficient subsystem. Our team's diverse perspective opens up a larger spectrum of ideas, aiding us in creating a happy team environment while creating the most effective robot possible.

# MY STORY: HEARTBREAK LEADS TO TRIUMPH

The first competition was humbling. It was exciting but we didn't bring home any trophies or awards. Same with the second competition. And the third.

I thought I let the team down. One of our goals was to win the Design Award so we could qualify for States. As the main notebooker, I felt responsible. I would sometimes notebook for almost seven hours a day - at practice, in the car, at my brother's basketball games, even on airplane rides. But we had nothing to show for it.

Instead of giving up, I decided to show that "Girl Powered" can find victory, to keep fighting with courage and bravery despite the challenges. I worked tirelessly pouring even more hours into our robot, notebooking, interviewing, and better understanding the criteria of the Design Award. One of our coaches advised that I use the "Guide To Judging Handbook", so I did exactly that, printing out every page and taping it all over my wall to study. Unlike the past, I wouldn't let fear stop me.



Finally, all the hard work paid off. Our team won the Design Award in the very last competition of the year. After months of heartbreak, we finally found triumph. Our team of eight boys and one newly confident girl celebrated wildly, jumping up and down, crying together in victory.

# ROLE MODEL SHOWED ME “THE BEST IS YET TO COME...”

My friend survived bone cancer but didn't go unscathed. Doctors painfully removed his old knee to ensure the cancer wouldn't return, replacing it with an artificial knee. Unfortunately, he can never play sports again.

That's why Atieh Moridi is my role model. Atieh is an assistant professor at Cornell University working to improve 3D printing to eliminate inaccurate fittings and make better bone implants. With her work, future patients will have better outcomes so they can continue to play sports despite having to replace their knee or other bones.



Atieh is also someone I look up to because she encourages girls like me to pursue the field of STEM. In a recent interview, she said the following about STEM, “I'm really passionate about this so I can meet more girls in their critical stages and let them know math, science, and engineering **is** for girls.”

I hope I can continue the road that Atieh has paved for the next generation of Girl Powered leaders.

I feel like the best is yet to come...

Walking away from our team's last competition holding the award we worked so hard for definitely proved a lot. Not just to my team, or the people who doubt the power of girls, but also to myself. Whatever anyone said girls couldn't do, is exactly what I did do and I helped our team win. Our hard fought Design Award is taking us to States and is proof that girls can be part of a diverse, inclusive team and accomplish anything.

This team may not be powered by all girls but there definitely is a girl with power who is determined to take the STEM field by storm.

