Why Girl Powered?

Hi! My name is Harini Vijeyanandh. I am part of 44777U-Discobotz, VRC team.

When I hear the phrase, 'Girl Powered,' the first things that come to mind include activities powered by girls who add a unique perspective to a team. The idea of 'Girl Powered' is demonstrated in my world by the rising number of girls in my STEM school and by my robotics team of which I am its first female member. I am a freshman, at Tesla STEM High School in Redmond, Washington. For the first time since my school was built in 2012, there are more girls than boys! Our Freshman class has shown that girls exhibit equal interest in various STEM opportunities like boys. Students are very competitive at my school, and we girls embrace any challenges that come our way. Challenging environments encourage me to work harder and think smarter.

My VRC team this year consists of five members: four boys, Sarvesh, Varun, Agastya, and Arjun, and myself—the only girl! Our team is truly diverse with four of us attending different high schools and Varun in middle school. In 2018, one of the original VEX IQ teammates left the all-boys team, and last year the team decided to add diversity to the group by including a girl. When I received the team's invitation, I did not yet have any exposure to robotics or related competitions. Since joining the team, the journey has been a wonderful experience for me.

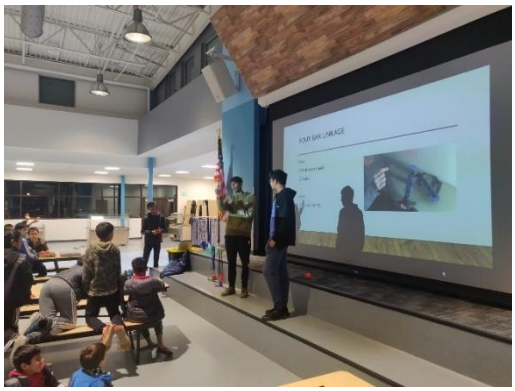
Prior to 2018, I had no knowledge of Robot C or the various ways to design/build a robot. My team was very supportive and welcoming. They gave me the material, time, and valuable guidance I needed to ramp up and effectively support the team. I have used my newfound skills to shine in my responsibilities as an engineering notebook manager, builder, and coder. In my new role I have designed the engineering notebook structure for our team and went on to help my team win the VEX IQ Design Award in the Washington State tournament 2019. I consider this award as one of the most significant recognitions I can receive for my individual efforts in robotics.

I am empowering this robotics team and showcasing 'Girl Power' in many ways! The unique skills I bring to my team include managing our time during meetings, planning our schedule, and writing and designing our engineering notebook. Generally, boys tend to be fast thinkers and usually try to get straight to the work. In contrast, girls often try to plan everything thoroughly and execute things in an organized manner. In my team, I am always the one to encourage my team members to slow down and work impeccably.

My team has always believed in giving an equal opportunity to everyone to try all the various roles on the team. While deciding our jobs, during the initial weeks of robotics everyone takes up and tries all the tasks. This gives everyone time to realize what they can best contribute to the team. For example, once we had a basic robot, we had a mini competition to determine the most qualified driver which was Sarvesh. Agastya and I were chosen to be the Engineering Notebook Managers when we showed that we can create a good layout and make the notebook easily readable. The Engineering Notebook Manager must also make sure everyone in the group contributes to the weekly notes and writing the tournament breakdown. Similarly, Code Manager role was assigned to Varun as he is a critical thinker and has great experience in 'C' language. Arjun is good at staying on top of all the necessary communications, so he is our main Communicator. Besides this everyone has to help build and also code one part of the robot, which Varun can then combine and write the autonomous. This process of finalizing the roles has helped me identify my key strengths and my value add to this team.

My team took an initiative to create a more inclusive environment that attracts a diverse group of students through many methods. First, in our team, we always take the opportunity to include everyone in all of our conversations and decisions. We believe that diversity of interests and skills bring new ideas to the board and helps the team work better.

Furthermore, we show diversity outside of our robotics team by volunteering in many events to promote VEX robotics and to attract new groups of students. To create a more inclusive environment for all students we do an **Outreach Program** in Ella Baker Elementary school, where we teach the students how to code, build robots and successfully compete in VEX robotics competitions. Additionally, during robotics competitions we volunteer and help out in our old middle school for: scoring, check in, pit set up and resetting the field. We have always had the passion for helping others. Especially in competitions when we see younger middle school teams needing help, we are more than happy to support them. We share tools/pieces, help them fix parts of the robot or give them ideas of changes to make to their code. Overall, instead of just focusing on our robot, our team is outgoing and always helpful to other teams.



I strongly believe that having diverse perspectives is essential to the success of any team. Diversity means differences, and diverse people contribute value by offering different viewpoints, experiences, knowledge, and perspectives. The design is critical to build an outstanding robot for the tournament. In order to conceptualize the robot design, each of us drew our designs, presented it and voted for the best design. This strategy enabled us to identify pros and cons in each design well ahead of the actual building. With the chosen design we built the robot which seems to work best for this year's challenge. Currently we are enhancing the robot to give its best for autonomous and manual driving skills. Our team member's different perspectives really added value to the design of the robot.

Our team works cohesively. We always stay focused on the task and have lots of fun while working together. I look forward to my team meetings each week. Personally, I am able to succeed well in this group because everyone here spreads positivity and they really encourage me to give my best which helps me boost my confidence. I am meticulous with tasks and strive to keep the boys focused when we are working. My group always respects and looks up to me as a key part of our robotics team.

The two STEM role models I look up to are my mom and my coach Senthil.

My mom and I have this special bond together that I'm sure exists between mothers and their children all over the world. I adore her for her strong knowledge of mathematics and sciences. She is an electronics engineer and an IT professional. She often narrates stories of how her dad (an aeronautical engineer himself) used to motivate my mom and her sister to pursue a career in a STEM field as there is a bright future for woman in this area. Her stories inspire me to do my best in everything I do. She was the one who encouraged me to give robotics a try when my team invited me. She has supported me through every aspect of robotics and school studies till date.

Our coach Senthil is the best coach anyone can have, and I am so lucky to learn robotics under his guidance. He is very supportive, hardworking, an excellent critic and is very passionate about robotics. He always encourages, motivates our team to overcome failures and come back up with full steam! He has an engineering background and loves automating things at home by building robots himself.

My Message to all Girls:

I have been doing robotics for 2 years now and all I want to say is, “Just follow your passion, look forward to challenges and be confident in what you do!”

I strongly believe in this quote:

“*The future belongs to those who believe in the beauty of their dreams!”* – Eleanor Roosevelt

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CREDITS:

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