

Matthew Gimbel

44833B: Got a Screw Loose

Title: Inclusivity in Competitive Robotics

To 44833B, the Girl Powered brand inspires equality and open opportunity in engineering and other fields. Rather than only ushering forth women in STEM, the Girl Powered initiative advocates for a unified push in raising the equality standards of not only VRC, but it also promotes inclusivity in the wider world. While it spearheads the issue through female representation in engineering, the message of Girl Powered is not limited to ladies; rather, it speaks to minorities and majorities alike by ushering forth a new wave of equity in the workplace by starting with the next generation of world leaders: our youth. This message has penetrated our team to its very core, inspiring a sense of equality and inclusiveness in all aspects of our competitive robotics experience. Our developing team has risen alongside our young organization against the daunting competition to a position of leadership, but we would not have been able to do so without the female support that comprises the very blood running through the heart of our team.

When the team was crumbling at the beginning



of the Tower Takeover season due to teammates losing interest, some amazing young ladies, Missy and Tabby, saved the team. Attracted to the group because of our inclusive ideology, they

were able to stitch it back together using their new viewpoints and unique skill sets. They stepped up and took the brunt of the increased workload when my own capabilities as team captain were stretched thin. While they may not have been holding the controller during matches, they had an indescribably deep control of the team's fluid operation. Without their help, the team likely would have collapsed into chaos. Moreover, these astounding young women not only provided invaluable contributions at competitions, but they also provided the necessary focus between events to maintain the team's fluid dynamic. By the time the team went to state, three-fifths of it was female, and



"My former team did not appreciate my ideas and what I thought could better our team, so I stepped into a role on this team where my teammates legitimately care what I think and truly value my ideas." - Missy V.

we all felt empowered because of this. These ladies were not relegated to stereotypical jobs.

Instead, they were integrated into the extremely hands-on approach our team favors, and they

"The team helped broaden my horizons and helped me work on team-building skills. The ability to take part in the State Championship tested and allowed me to improve my interpersonal and public speaking skills." - Jackie B.

contributed excellently. For example, Jackie, a rookie senior, was encouraged to join our team by other female members because of our accepting and welcoming attitude. She ended up being invaluable in assisting with final mechanical tuneups before

competing. At competitions, we were in the midst of a male-dominated field, but our ladies proudly and confidently took the initiative in highly stressful tasks such as scouting and coaching on the drive team. Inspired by the highly inclusive and diverse atmosphere created by our team and those around us, the young women grew increasingly knowledgeable, confident, and

outgoing. Furthermore, empowered by the highly competitive atmosphere, we tackled the challenges laid before us not as individuals but as a unified group.

Being such a new team from a young organization, this was our first venture to the state competition. We were all greeted warmly by our peers, who had grown to respect us throughout several prior competitions. Over



the course of the season, we faced seemingly insurmountable odds, claimed our first Tournament Champion trophy, and grew into a stronger team recognized throughout the region as a symbol



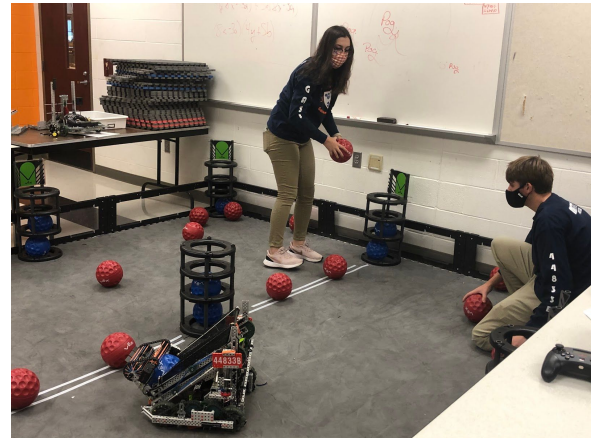
of determination and creativity. The Girl Powered initiative speaks to us not because we are the stereotypical all-female team facing the heartless discrimination of a masculinity-dominated competitive field but rather because its message connects to our collective experience: we can overcome the mountainous challenges before us if we only

persevere through the obstacles set ahead of us together.

Moving into the 2020-2021 season, we were riding high on confidence, but we knew that our experience alone could not carry us to our ultimate goal of competing on the world stage. All of the team members were ready to develop their skills further. The women on the team were ready to tackle any challenge thrown their way and apply their newly learned expertise. For instance, Tae (formerly known as Tabby) took control of project management, an area where the team struggled. Even in the face of the uncertainty of a global pandemic, our team adapted and marched onwards. With the notions of perseverance and equity behind the Girl Powered

movement ushering us on, we were able to confidently progress into a new season filled with uncertainty as a homogeneous team.

Our connections as a group are strong, and this is reflected in our team dynamic. The ladies have taken prominent leadership positions such as team branding, project management, and programming. However, we do not sequester ourselves to one role on the team. For example, our programmer, Kaya, has driven the robot to help her



better estimate the difficulties undertaken by our primary driver. Using this experience, she has been able to program the robot's autonomous movements more effectively. Similarly, our lead driver, Hayden, has investigated some mechanical imperfections in the robot. This technical knowledge has enabled him to increase his driving performance. Furthermore, we share the responsibility for ongoing projects such as robot maintenance, notebooking, and programming. For example, our main notebooker, Jaxon, sometimes hands off the notebook to a teammate while he undertakes programming endeavors. Because we all explore different aspects of competitive robotics and step outside of our comfort zones, we can each gain a better appreciation of the difficulty of one another's jobs and can more effectively perceive the challenges associated with such endeavors. By diversifying our abilities, we can better prepare the team for unforeseen circumstances. Moreover, we can each find a role that suits every individual best. Because of this more fluid group dynamic and a plethora of diverse perspectives, we can consider one another's challenges when designing a solution to an obstacle, resulting in a smoothly-operating collaborative group of students. By embracing the Girl Powered initiative



and being inclusive to all opinions and prospects, our team has grown to be more well-rounded as a whole.

Being well-rounded as a team stems from well-balanced contributions from each team



member. Like our STEM role model Marie Curie worked collaboratively with her husband, we work together as a team despite our differences. The Curies were stronger as a team, and so are we. Similar to how we face the unknown with curiosity and vigor in our daily undertakings, Marie Curie pioneered a new path for women in chemistry. She did not let gender discrimination keep her from the

research that led to a Nobel Prize, and we will not let the challenges ahead of us dampen our efforts. Marie Curie's legacy reminds us to be inclusive to creative and often unconventional ideas and differing perspectives, as our team name "Got a Screw Loose" suggests. Be it Missy networking by passing out personalized pens at competitions, Jaxon offering robot design ideas during pandemic conference calls, or Kaya taking the initiative to learn coding to fill the programmer role, we all contribute to the team regardless of race, gender, or age. Rather than allow them to create rifts in our team dynamic, we use our differences to empower us.

"Although I had to learn to code using the V5 program for the first time this season, my prior knowledge in programming and my experience driving the robot, as well as my hope to inspire other girls to pursue their interests in the engineering fields, helped me to persevere through the hardships and frustrations associated with competitive robotics." - Kaya C.

The Girl Powered initiative is integral to our team. Female leadership propels the team forwards. To us, the notion of Girl Powered does not merely apply to women; it symbolizes

strength, equality, and unity in the face of insurmountable odds. Without the contributions offered by the astounding young women on our team, we would not have been able to persevere through the endless array of challenges associated with competitive robotics. Even though our team may be composed of 50% young men, we are 100% Girl Powered.

