



Team 9682C: Piece to the Puzzle

Participating Member(s): Emilie
Team Location: Olympian High School, Chula Vista, California, U.S.A.



At the beginning of history, girls had restrictions on their ability to build their piece to the puzzle. The puzzle in this instance represents a new path to a society where genders are recognized equally. Over time, generations have advocated for our rights. Hence, hard work and perseverance have gradually removed barriers for future generations. As time passes by, recent generations have been building bigger pieces with access to more resources. Thus, in the present, our generation has received the chance to be more impactful. I have the opportunity to contribute to making robotics more representative of our diverse society. In the following slides, you'll get to know a little about the team and me!

Meet us! (Girls)

Addison Rushing
Co-Captain/Engineer



Addison is a **senior**, and she has great designing skills as she **designed our team shirts** as well as the shirts we're wearing in these pictures.

Bella Glinsky
Illustrator



Bella is our **freshman** illustrator for notebook drawings. In the future, she wants to **help build military weapons**.

Chaz Zamberlan
Programmer



Chaz is a **freshman**, and she has **experience with robotics**, with her past team going into finals before.

Natalia is a **junior** and creates our team's tri-fold as well as helping me with the notebook sometimes.

Natalia Campos
Trifold and
Notebook Assistant



I am currently a **sophomore**, and this is my **first time** in anything related to robotics.

Emilie Loke
Notebook Manager



Ethan Page
Co-Captain/Engineer



As a **senior**, he helps the team besides building the robot with **taking videos of our practice trials** for both driving and autonomous trials.

Viggo Goeslar
Engineer Assistant



Whenever the engineers are building and **need a material** quickly, we have our **freshman** to get it and help them.

Anton Yakovlev
Metal Cutter



Anton **cuts C-channels and drive shafts** whenever needed for robot designs. He's a **junior** right now.

DJ is a **freshman** and he cuts notebook images, **organizes the practice field** during driving and autonomous practices, etc.



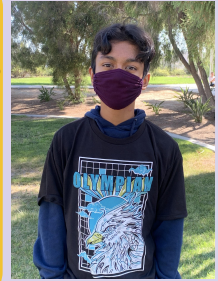
Donel Johnson (DJ)
Team Helper

Andrew Chon
Engineer/Driver



Andrew is currently a **sophomore**, our only driver, and has **previous experience** with robots.

Daeven is presently a **sophomore** and is our main engineer since he has **previous experience** with robotics.



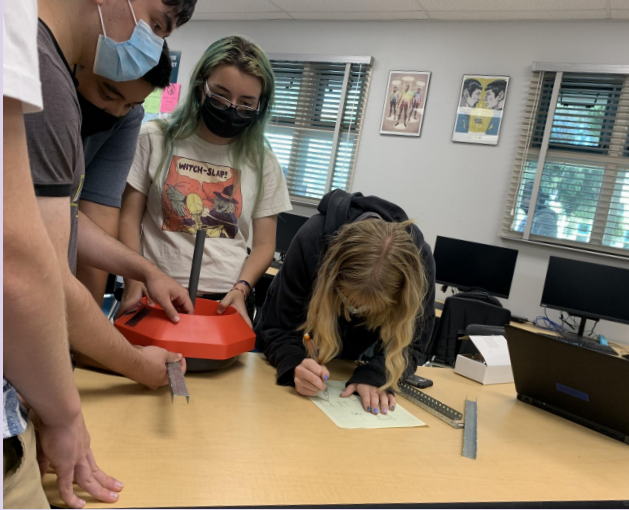
Daeven Asthana
Main Builder

Meet us! (Boys)

When thinking about “girl powered”, I envision **smiles**, confidence, open to sharing ideas and working together with people. Such terms can be reflected in our team, where we have an almost equal amount of girls and boys. We are the **team with the most girls in our school.**



This **did not happen because we do not see gender.** It is because we **accept individuals** in how they come. We do not see outward appearances as a way to judge a person’s potential or reason to diminish their voice.

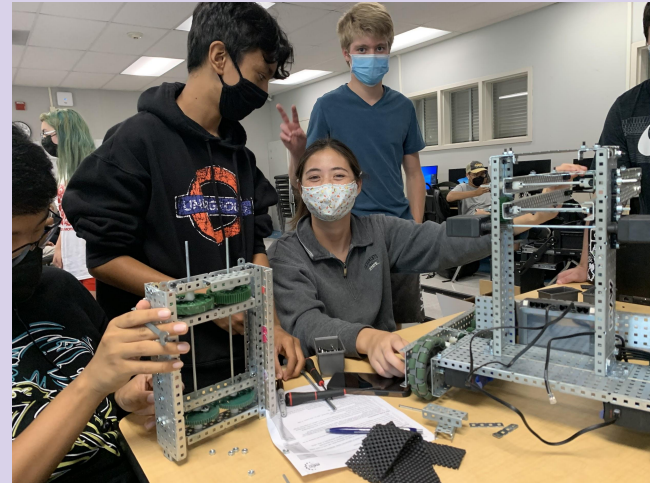


Girl powered also extends to recognizing that **girls do not have to dominate** but feel a part of the group. That “puzzle” generations of girls have built towards, is not completely made up of girls.

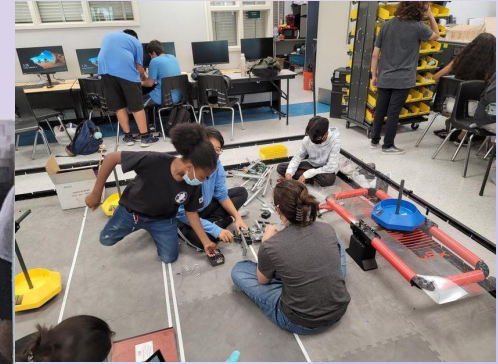
Supportive boys are also helping create this new path to a better. In our team, we can see such treatment during brainstorming sessions and allowing for everyone to choose their roles instead of being given roles that may be based on stereotypes.

For instance, Bella is happier drawing because it **greatly contributes to the team** rather than her being an engineering assistant when **more skilled people can do such work**. Girl-powered relates to *girls feeling empowered by the traits and skills that make them up*.

Looking back at how our team came to be, I believe our team attracted all sorts of people with its **openness and sympathetic environment**. We demonstrate respect and openness to listen to others. Also, we have good jokes from time to time. :) In turn, we provide a comfortable and fun space to **attract all types of ethnicities, gender, race, sexuality**, etc. This environment helps get through both bad times and creates more memories during the good times.

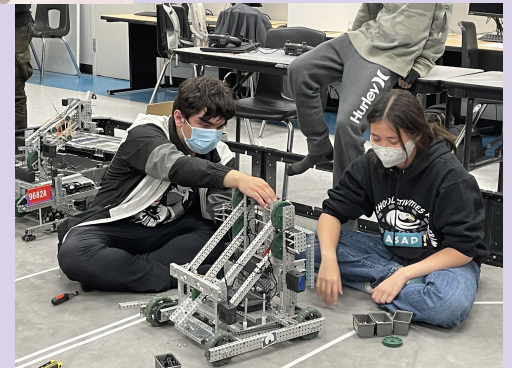


Having many different members may make it harder for a collective stance on decisions, but I believe that is what makes our team better. It **challenges us to determine difficult decisions when people have divided opinions.** We learn about distinct perspectives and **stimulate more teamwork** within ourselves.

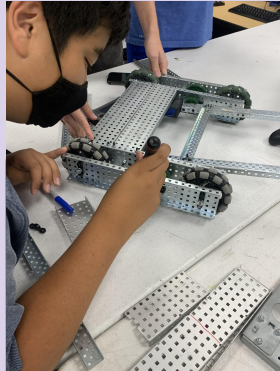


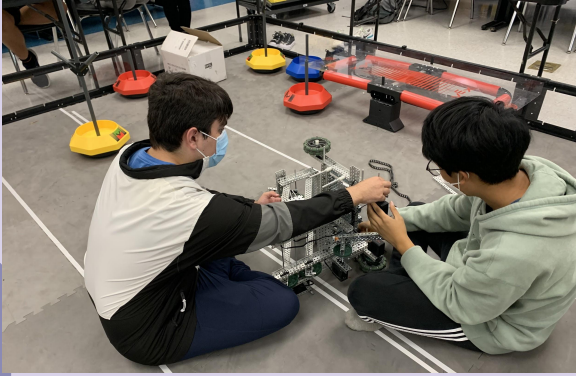
Over time, we have learned **how to respond to each of our members' behaviors**. I strongly see our team as a **compassionate** one because of the girls we have. Not every day goes well for everybody. Whenever a member is feeling down due to pressure or tired, we know how to react. I am happy that our team provides such an environment.

Of course, the boys are helpful when a member is having a bad day, but most of the time, they are better suited for **jokes and making the days fun**. Hence, our team chemistry grows to be stronger during hard times as the **girls' empathy and the boys' enthusiasm** create **great synergy**. Moreover, I can see our team is girl-powered with the representation of **both genders in our captains**.



Another effect of spending time together is we get to **suggest changes to see if the team agrees or disagrees**. For instance, Chaz is our only programmer. I initially suggested adding Natalia to programming because she has some familiarity with coding. However, our discussion led me to realize having Chaz as our only programmer benefitted more than having two. Natalia explained she was better at designing things, coming up with appealing tri-folds and ideas for the notebook. This is one example, but it represents our team. Our **members can have more than one role, but taking two roles may lead to weighing our team down because one may not be completely focused on either role.**

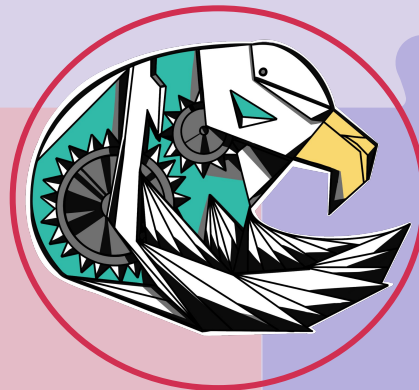




The **only member** we do have that has officially two roles is **Andrew**. He initially was only an engineer. However, after our first ranking session, he volunteered to be the driver. Thus, he learned more about programming because he discussed with Chaz when she would work on autonomous. Meanwhile, this showed **another relationship in the team that reflects our team being girl-powered**. With him having two roles, he did not show the thought of being superior to anybody else. He sees Chaz **as an equal, and they work hard together**.



Despite our roles being established, it **does not limit our members' voices in fields their roles are not in**. Viggo, Anton, DJ, and Ethan helped Natalia build the tri-fold when they were free; Addison designed shirts for us in her free time, and **all members are welcome to come up with ideas for strategy**. Our team chemistry increases our ability to succeed by thoroughly communicating ideas and playing to our strengths.



Our team perseveres with determination to keep equal recognition of the girls' and boys' work on the team. Our hard work reminds me of my STEM role model who also **worked hard to get the recognition she deserved: Chien Shiung Wu.**



In 1956, Chien Shiung Wu conducted the Wu experiment to carry out the theory thought by Tsung-Dao Lee and Chen-Ning Yang. Although the two men were awarded the Nobel Award a year later, **Wu never got full recognition in proving parity violation.** She was only mentioned in their acceptance speech.

Her experiment was **critical for the development of the Standard model;** it proved that the weak force is not influenced by parity transformation. Without her, the two men would have not gotten their Nobel prize.

Nevertheless, not receiving a Nobel prize **did not put her down** and neither did the sexism and xenophobia in the physics field.

I am happy to know that if you put in the work, you will eventually get recognized. She later received the **National Medal of Science, Wolf Prize in Physics, and Comstock Prize in Physics.**

Furthermore, I commend her for choosing to be a teacher after her contribution to the Manhattan Project. “Chien-Shiung Wu was the first woman hired as faculty in the Physics Department at Princeton. The university had an all-male student body at the time”. She **advocated for women to persist in pursuing careers in the sciences.**



Citation: “Women in Radiation History: Chien-Shiung Wu.” EPA, Environmental Protection Agency, 13 July 2021, <https://www.epa.gov/radtown/women-radiation-history-chien-shiung-wu>.

In a way, Chien Shiung Wu and I are similar. We both are not uncomfortable working in a space where the field is male-dominated but wish for better representation of genders in the respective fields.

Like Google and the REC Foundation, I want to make robotics reflect the outside world more. I wish to continue robotics for the rest of my high school years. I wish to continue highlighting that girls have contributing skills in robotics. They should be seen as equal to a boy's work and not be undermined because girls are not the dominating gender.

Girl Powered means to not place individuals in boxes because of the stereotypes one might have based on their appearance. It is utilizing what each person is best at and using it to enhance the collective identity of the team. Thus, that "puzzle" will continue to be built because the strength we need is girl-powered.

