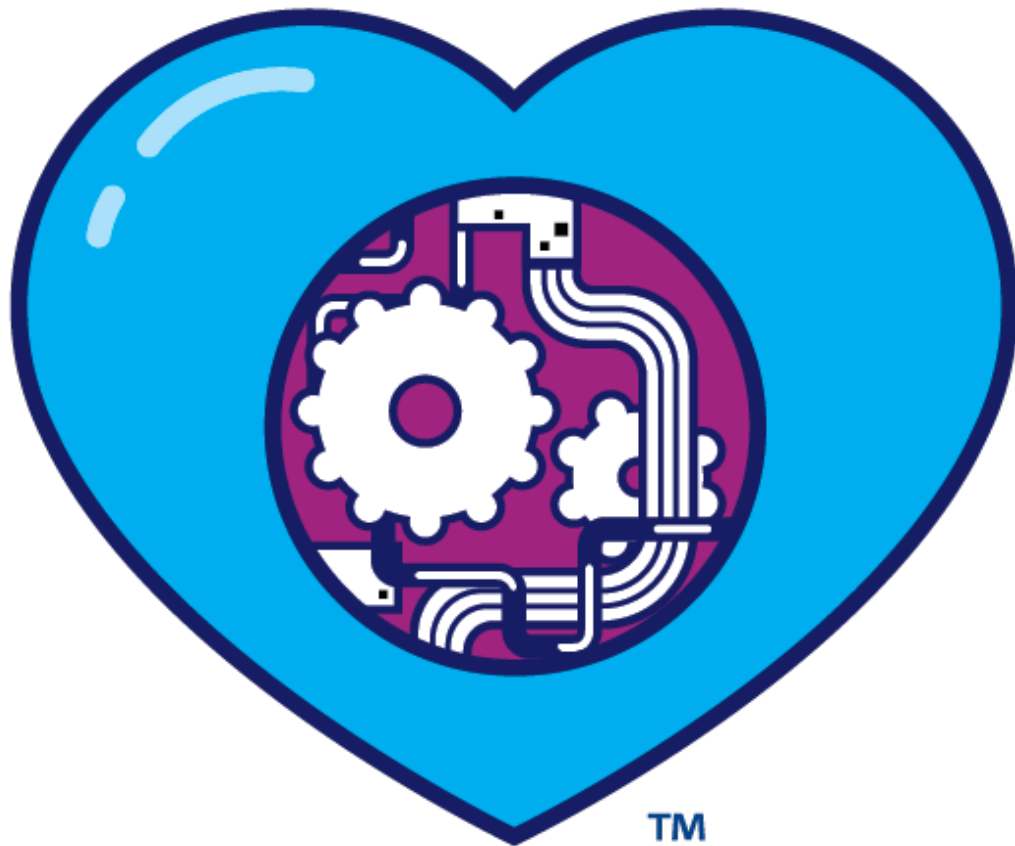


# Girl**⚡**Powered.®



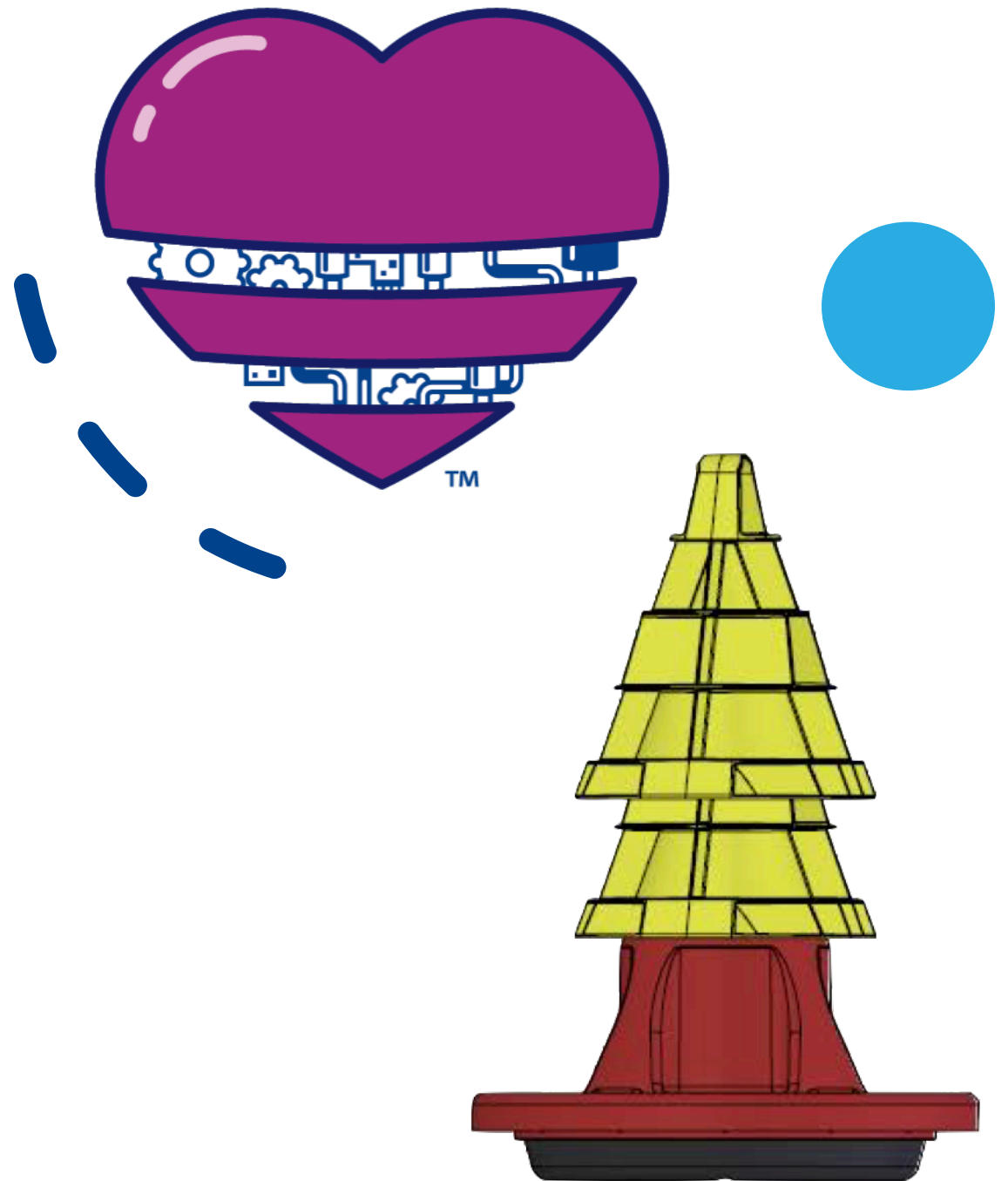
## Changing Up the field of STEM

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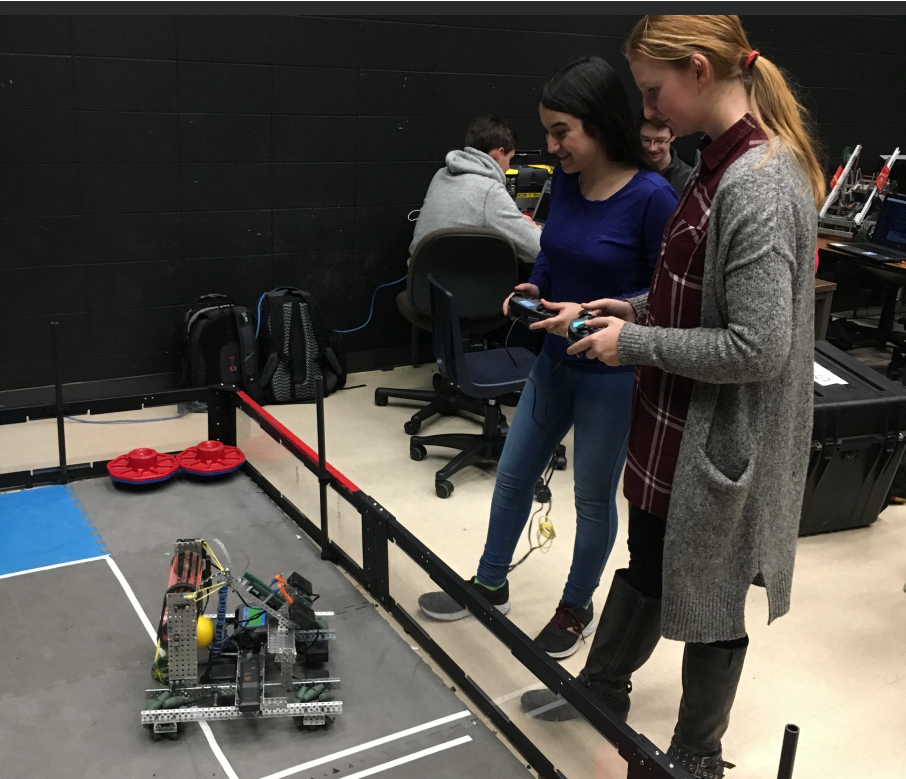
# Powering Up

In my first year in robotics, I walked into a **room full of boys** and I didn't know anybody. Luckily, I was soon joined by another girl, my friend and future teammate. That year our team had 4 girls and 2 boys on it and was the only team in the club with any girls on it.

Our first year as a team was not very successful. Collectively, we only had one year of experience in robotics and we performed very poorly in our competitions and with our notebook. However, **we learned a lot** and the experiences from that year contributed to our current levels of success and skill.

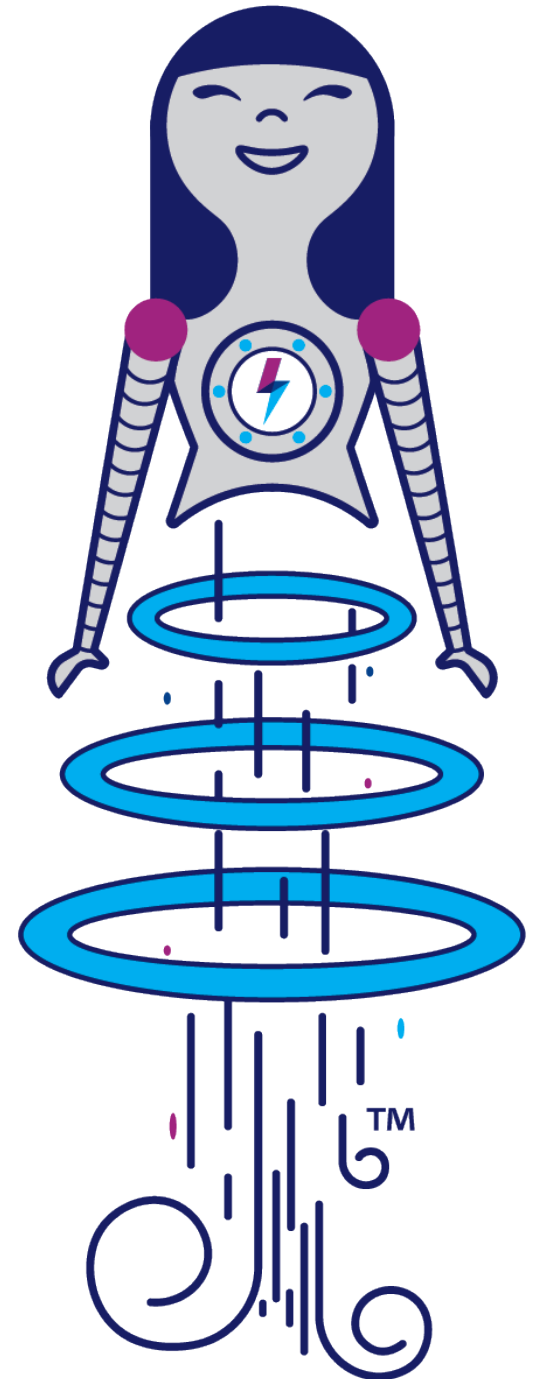


# Gaining Traction



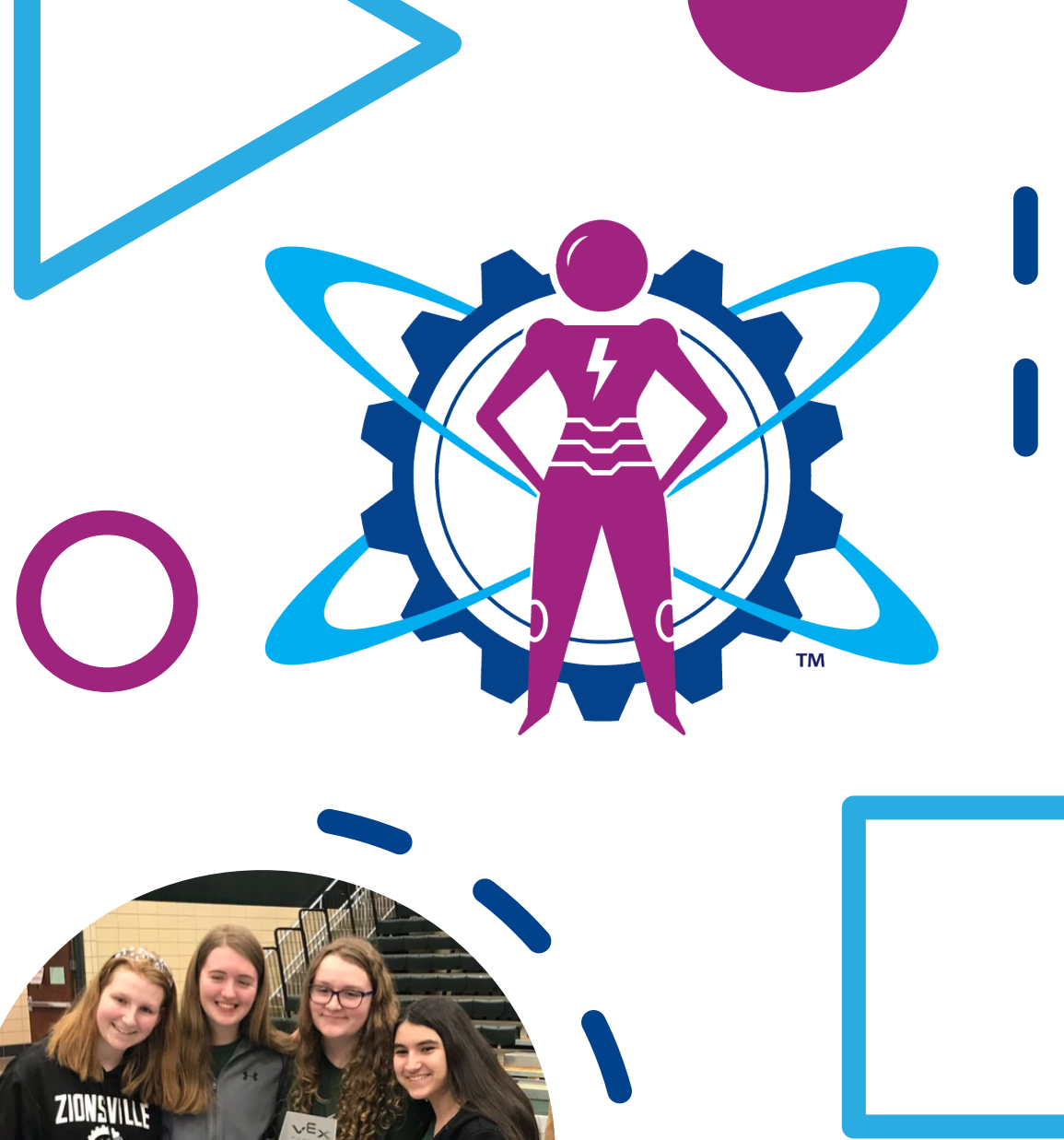
In our second year in robotics, we were an **all-girls team**, and we were also still the only 4 girls in our school's club. Notably, we managed to do a lot better than the previous year. We learned from past mistakes and decided to change our main notebook keeper and put more focus on the notebook. While we did not win any awards, we got our first judge's interview.

We also added a new member to the drive team and we each experienced every role within the team to see which person was best suited for each role. As a result, our robot was **vastly improved**. We went from being in the bottom quarter of robots to about the middle.

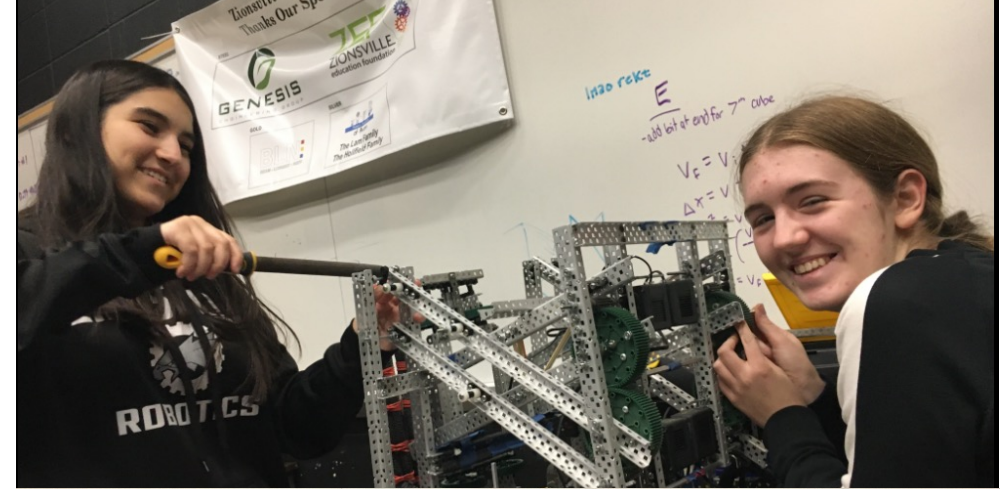


# Accelerating into Accomplishment

Last year our team experienced **many successes**. We made it to the state championship with an excellence award and received several other awards throughout the season. In addition, our club added two new girls to its ranks. By this point, we had all settled into our roles with a designated builder, driver, programmer, etc. and this **allowed us to excel**. We also all helped each other out allowing us to be even better as a group than any one of us could have done individually.









# The Team



## Lilia



Lilia is a Senior in her 4<sup>th</sup> year of robotics. She is the main **match driver** and does the **programming** and maintains the **notebook**.

## Kaitlyn



Kaitlyn is a Junior in her 5<sup>th</sup> year of robotics. She is the main **skills driver** and **head builder**. She also works as a **scout** during competitions.



# The Team

## Mia



Mia is a Senior in her 5<sup>th</sup> year of robotics. She is our other **scout** and our **designer**.



## Camilla



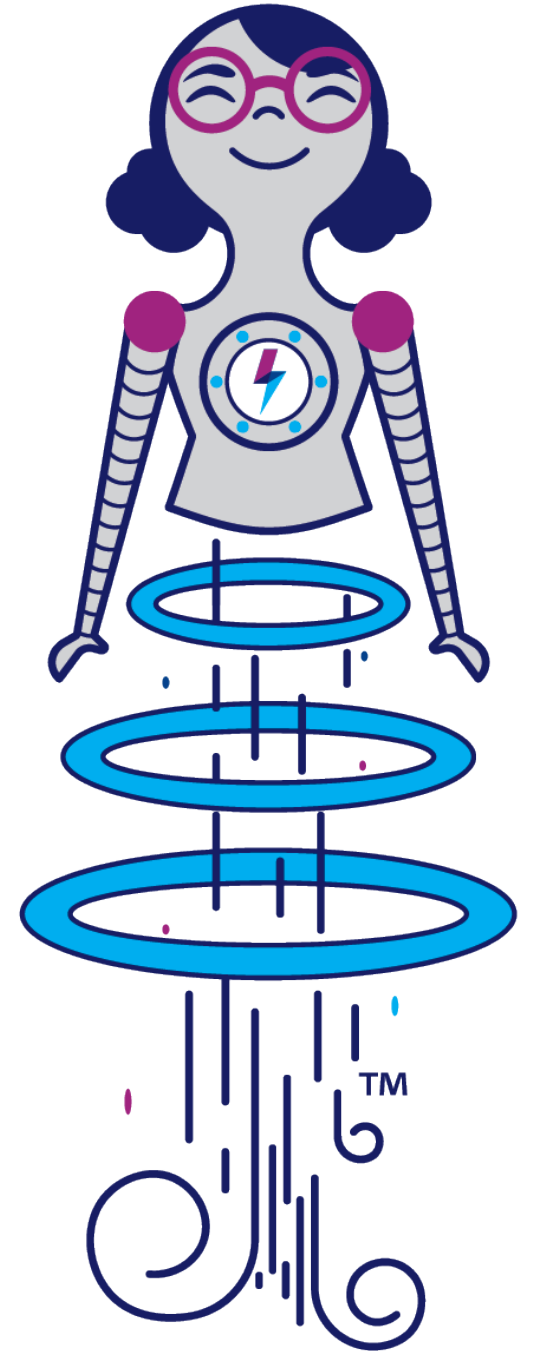
Camilla is also a Senior in her 4<sup>th</sup> year of robotics. She is the **assistant programmer** and **builder**.



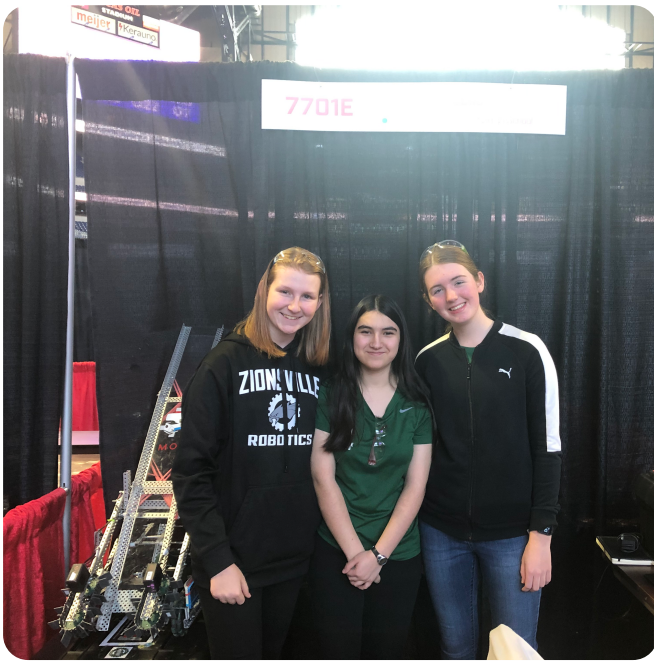
# Strength in Diversity



For us, **Girl Power** is more than just a phrase. We are constantly reminded of the gender gap in STEM every time we go to a competition where most of the competitors and judges are male. To us, Girl Power means **supporting everyone to go further in STEM** fields and achieve more when united than we ever do divided. This year we are once again the only girls in our school's club, and we are more aware than ever of the challenges facing women in STEM.







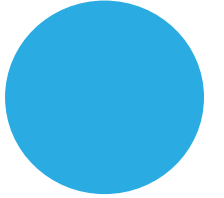
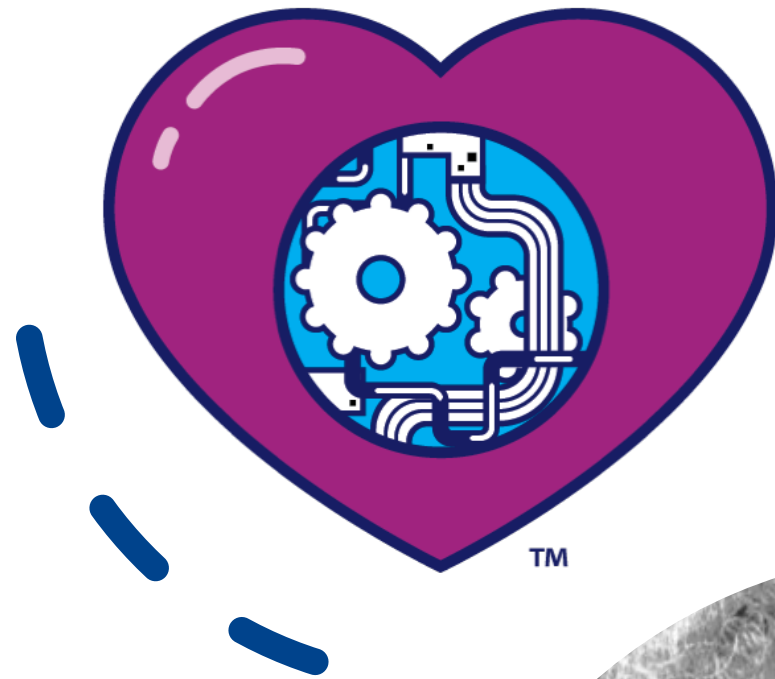
# Diversity of Perspective

Our team is very **diverse in perspective**. We all have different aspirations for what to do once we graduate ranging from medicine to physics. We have all taken vastly different classes and this is reflected in each individual team members approach to a problem. While some of us prefer to think over a problem and plan out a detailed solution before starting, other prefer immediately working on the robot and finding a solution to the problem using trial and error. These differences of approach are crucial to the team because they allow us to achieve a healthy medium between never changing anything and changing the robot to the point to destruction. In addition, we are all good friends and enjoy spending long nights in a basement working on the robot the night before a competition.



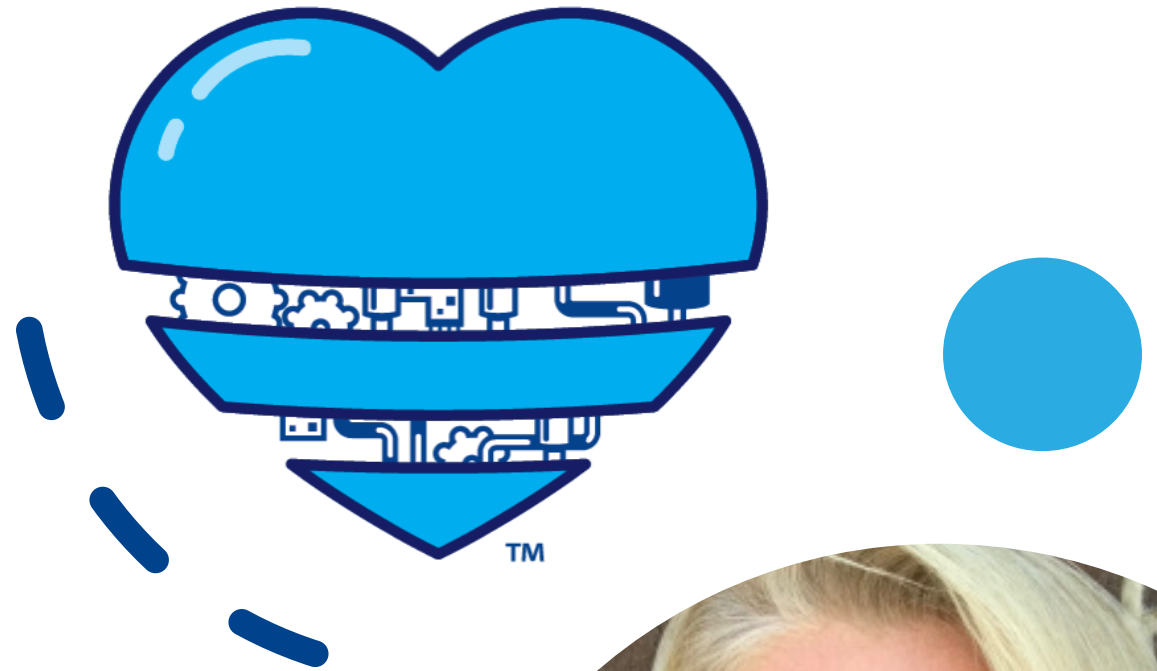
# Marie Curie - Role Model

My STEM role model is **Marie Curie**. I remember in middle school I picked up a biography about her and was inspired to continue pursuing STEM classes. Learning about her contributions to the fields of chemistry and physics and the sacrifices that she made to further human knowledge motivated me in my STEM career and helped teach me about girl power. Having a good female STEM role model is very important in getting young girls interested in STEM especially as many studies have shown lack of female role models is part of the reason many women stop pursuing STEM careers.



# Rachel Gerrish - Role Model

Our other STEM role model is **Rachel Gerrish**. She ran the AgBOT challenge and was a sponsor and coach to our school's robotics club last year. She was a great inspiration to our team as an example of a female succeeding in a STEM career. We also helped teach her daughter robotics in order to inspire the next generation of females in STEM and robotics. Rachel helped our team immensely and supported us in our efforts to recruit new girls to the robotics team.





# Engineering Diversity

When I started thinking about who my role models were, I realized that I had very few female STEM role models, especially in elementary and middle school. According to Engineers Canada, **only about 14 percent\* of mechanical engineers are female.**

My team tries to help this problem by setting a good example for young kids whenever we can. We also hope that our simple presence in the robotics room will help **encourage more women to join our team** and not be scared off by the abundance of boys in the room. We know how intimidating it can be to be the only girl in a room full of guys, and we always try to help this by providing an encouraging presence in the room and supporting our fellow women.

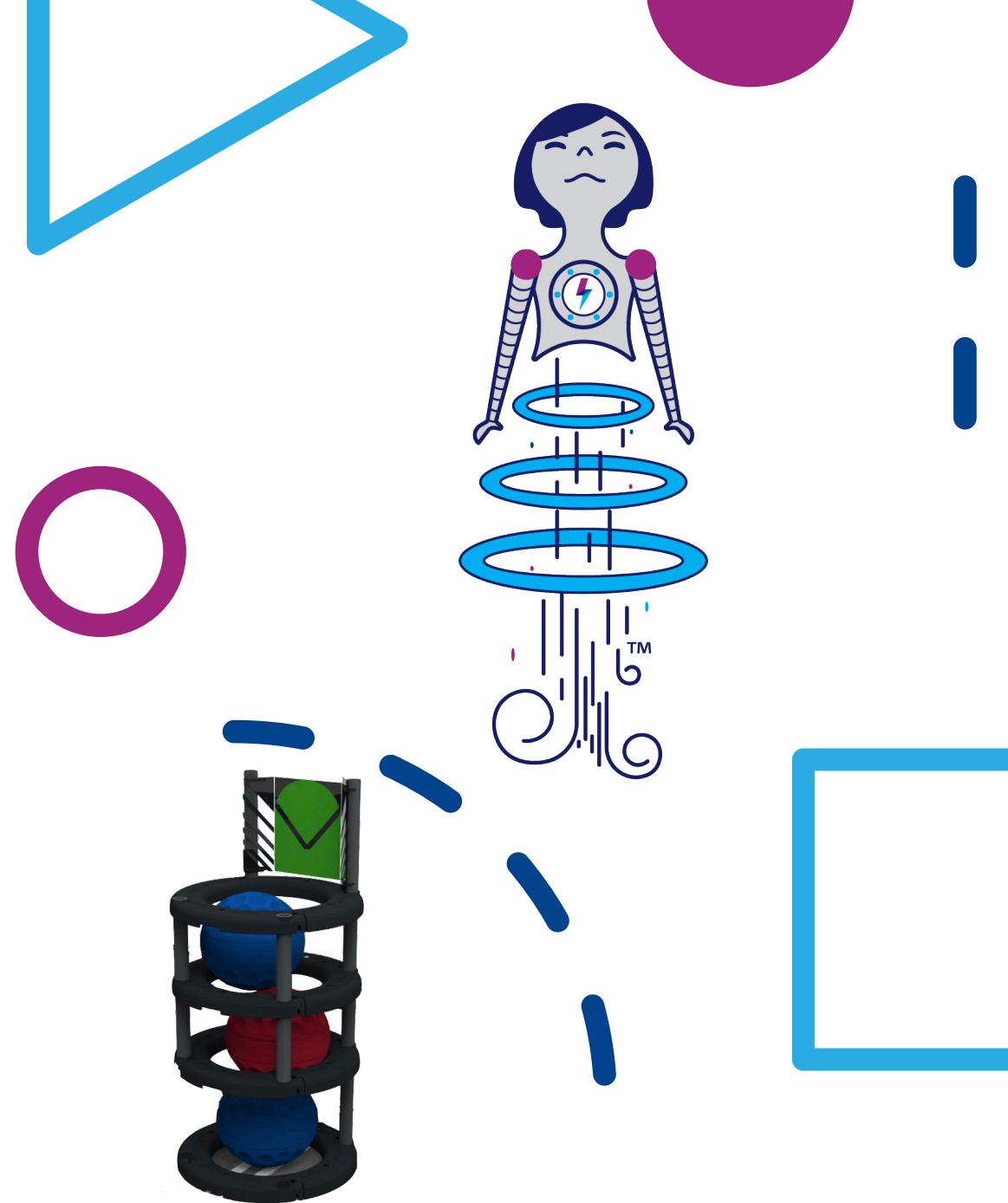
# ECHO

\* <https://engineerscanada.ca/publications/canadian-engineers-for-tomorrow-2017#female-undergraduate-enrolment>



# Leading the Future

**Diversity is crucial** in all fields, but especially so in engineering and STEM. Everybody has unconscious biases and when they are put in an environment with no diversity, they have no way of finding and countering their biases. This can be seen clearly in facial and voice recognition which work better on people like the type of people that programmed it, white men. With increased diversity, these unconscious biases can be recognized and stopped. While problems in design due to lack of diversity are not prevalent at the high school level, problems surrounding the predominantly male culture persist and are immediately evident when you walk into a competition and see very few girls. In addition, it is crucial to encourage diversity in every step to **ensure nobody gets left behind**.



# Inspiring Ingenuity



This spring, my team hosted a STEM event with **a local girl scout group** to encourage more young girls to join stem fields and to eventually join the middle school and high school robotics teams. Our team is always working on **recruiting more girls to the program.** To create a more inclusive environment we made sure that females are featured prominently in our recruitment video to ensure potential recruits will be able to see themselves properly represented.

# Changing Up the Field of STEM

## TEAM 7701E ECHO

Lilia Arrizabalaga

Kaitlyn Brake

Mia Brake

Camilla Wallbank

Girl  Powered.

