STEMming a Future of Equality By:Amy Nguyen



HELLO! I'm Amy Nguyen

And this is my Girl Powered story!



Fowered

My experience in a Girl Powered team

8838A- The Girls that Could 🎢

My first year of robotics was spent on Orchard Hill's robotics team 8838a, the infamous girl powered team. The coach, Mrs. Lund, told us that after last year she would've cancelled the team because it was doing so poorly. Instead, my teammates and I decided to prove her otherwise. **Our team went on to become notebook masterminds and robotic champions, winning the multiple excellence awards, winning two tournaments, and even going to Worlds to win a design award.** Today, 8838a is still a successful team that I mentor time to time. Being girl-powered is automatically categorized with being a "man-hater" or "a way to flaunt neon pink", but being on 8838a, it made me realize about how much stereotypes our team was being subjected upon, and how all of it was 100% false at most. Being girl-powered doesn't mean to just be a team of girls, but to achieve equality with men as well. Today, It feels like some coaches create girl powered teams without achieving a deeper meaning of why they did so. It hate to say it, but I always see the results of this at every single tournament my present team goes to.These girl powered teams are continuously called out as "a

of this at every single tournament my present team goes to. These girl powered teams are continuously called out as "a bad team" by their male counterparts, when all they need is a little advice and some more experience in the field. One teammate I contact frequently, Amisha, learned all of her coding via. Youtube videos, which is totally mind-blowing considering she was able to code our entire robot last year without any help! **Girls can do anything boys can do**, and being a member of the girl powered community, I strive to make that idea the norm. This is why with the help of some of my old friends in the 8838 program, we created G1, a private robotics program striving for equality in the robotics field.

Becoming a part of G1

How our team developed to become a stereotype-free environment for our teammates

Meet the Team

Yousef Kahn

Yousef is our programer and the oldest out

of all of us. He has taken the challenge of coding our entire robot (sometimes under stressful circumstances) and is still able to stay calm. Yousef has helped our team become more organized by enforcing schedules to complete at each practice. In his free time, he plays tennis and video games. **Timothy (Timmy) Tan**

Timmy is a builder and our skills driver. He is the most extroverted out of all of us, cracking jokes at any possible time. He helps represent the spirit of our team, being the youngest out of all of us but highly experienced in building. In his free time, he also plays video games and watches YouTube.

Cody Gee

Cody is one of our builder, competition driver, and full-time CADder. He comes up with innovative solutions, which is vital to the success of our robot. He is open to constructive criticism, which makes his build and drive quality better. In his free time, Cody plays video games with his friends

Amy Nguyen

Amy is the only girl on G1, but is capable of doing much more than just notebooking. She builds, CADs, cuts, and even strategies for the team. She makes sure the notebooks are organized and up to date. In her free time, Amy talks with her friends on the phone and spends time with her family.

G1- Building an inclusive environment for everyone



Our team was built around the idea of rule <G1>, "Treat everyone with respect." Each of our team members are unique in their own special way, and G1 was a way to embrace and respect that. I know some girls that are or have made independent teams in Southern California(88000X and 449X are some good examples), and it's wonderful to see some female representation in a non-school affiliated robotics environment. However, I still feel like we need more representation in this environment, and normalize the idea that girls can do robotics too. Whenever my team goes to competitions, I get at least one person who thinks I'm on the team "just for looks", but why make assumptions when I do the exact same work as anyone else in this field. Being girl powered means that girls shouldn't be discounted for the amount of effort they put in on their team. In fact, nobody should be discounted for the work they do. Our team strives to find balance in the robotics field, excelling in our notebooking abilities and build guality. To add on, since G1 is a relatively a new team, most teams undermine us for being "inexperienced" just because we are freshmen. Although we are an inexperienced independent team, each of us knows what we are doing and reflect it by the work we put through. This team comes from different

backgrounds, and make up who we are today: a robotics team with a dream.

Reaching out to other teams

Each of our team members strive to help others, and that's why we created accounts on online platforms for teams to reach out to us for unofficial mentorship. We may be young, but we can help other teams just as well as any other sophomore or junior team. Our team also visits our home middle school to provide them with the support they need to carry on with their successful seasons.









"You look at science (or at least talk of it) as some sort of **demoralising invention of man**,... But science and everyday life cannot and should not be separated. Science, for me, gives a partial explanation for life. In so far as it goes, it is based on fact, experience and experiment."- Rosalind Franklin

Rosalind Franklin- The Unsung DNA Heroine

When learning about who found the structure of DNA, we hear about James Watson and

Francis Crick. These men, along with another scientist by the name of Maurice Wilkins, supposedly found the structure on their own, and securing each of themselves a 1962 Nobel



Peace prize. However, one scientist's work went unnoticed and unacknowledged for many years. Her name was Rosalind Elsie Franklin, and she was the scientist who contributed the first x-ray picture of the DNA structure to her fellow colleagues. Ms.Franklin, with the help of her colleague Maurice Wilkins, also found out the shape of DNA, but was dismissed for her by Watson and Crick findings until it was actually proven by her picture. Even with the scientists in her field knowing that she was capable of finding these small clues to lead to DNA's structure, she was still undermined. March 6th, 1953 was when Rosalind Franklin eventually found out the structures of two A-DNAs (a day before Watson and Crick), but the findings of the men was much larger publicised than Rosalind's. On March 30th, she fell ill of ovarian cancer and died, not being remembered for the many discoveries (including the findings of the DNA Structures) until now. According to the committee dealing with the Nobel Peace prize, they cannot give prizes to anyone who has passed, but it was probably just an excuse to denote another female from the scientific field. Today, Rosalind Franklin has many memorials and schools named after her, in tribute to the impact she made to inspire more medical discoveries thereafter. I picked Rosalind as my role model because of her willingness and curiosity to find a solution to a question that has been plaqued in her community for generations, and never gave up no matter how much people doubted her. In the end, she died too early, but provided so many scientific achievements for the STEM community, as well as representing the small minority of women in science at the time.

The Future striving to become better team by creating a judgement-free environment and settling differences

Only 28% of women worked in the Science and Engineering field in 2018*

This statistic should be 50%. Let's start changing that today!

Information via. <u>https://ngcproject.org/sites/default/files/ngcp_the_state_of_girls_and_women_in_stem_2018a.pdf</u>

STEMming our Robotics story



G1 was created not because of who we were, but because of what we wanted to do: robotics. If a bunch of high school freshmen can bring people from different backgrounds together by a certain objective, why can't adults? The perception that robotics is for men is entirely false, and if we start breaking down at that lousy stereotype, just imagine how many more people would want to join this field. Not only just women: non-binary, transgenders, many types of genders basically. **Robotics shouldn't define itself under one type** of person or gender, but rather the people who do it. Not men, not women, not even all the genders in the world, but rather as a community. We are the STEM community, and we choose to define ourselves this way. We will plant these seeds of truth, and eradicate any weeds that decide to believe that robotics should be subjected to a certain type of people. We will watch our crops grow, until, in the end, our seeds have STEMmed into trees, showing that our STEM community can come together with the burning curiosity and passion we have for our fields. It is my dream one day to wake up and see these trees right out of my house, showing that anyone, male or females, simple fascination and curiosity into a topic can change our unbalanced statistics.



Credits

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