

# *Having the Courage to Take Flight*

Olympian High School

Team 9682A

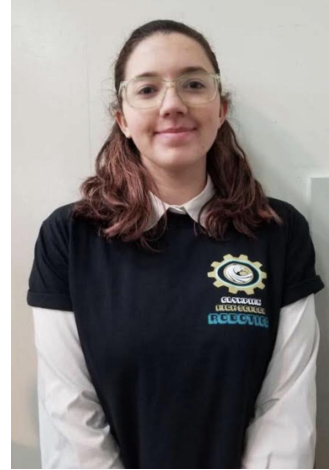


Our team is 9682A from Olympian High School, Eaglebots as we like to call ourselves. This year not only were we able push ourselves way beyond personal goals but we were also able to support others who were new to robotics and STEM.





I'm Elaine Llacuna and I am a senior at Olympian High School. I am currently president of our Robotics program as lead engineer and I have been involved in Vex since 8th grade.



I am Sarah Yager, a sophomore at Olympian and lead programmer for our robotics team, and I've been doing Vex robotics for three years.

## Meet our Leads

*Last year  
Olympian  
High School's  
Team 9682A  
~Elaine~*

After the 2018 VEX Robotics League finals for my High School, I carefully held the plaques my team, 9682A, earned, in disbelief that our school was able to come so far. The tournament finalist and judges awards that we earned as a new all-female team were the first awards our school ever received in Vex Robotics. However, I believe the story behind the plaques was a reward far greater than than the physical trophies.



*Our perspective  
on being female  
on the team  
~ Elaine~*

As the person who was on robotics at Olympian the longest I've seen how much its changed. I remember walking into my high school's robotics club as a freshman. Seeing only a single tool box and a herd of students in the back of a math classroom, I realized that building the club up to the resourceful, thriving environment that I had experienced in middle school was not going to be a simple task.

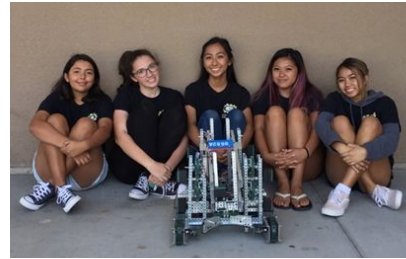
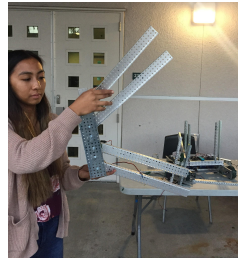


*Photo of our Robotics Club from 2015*

*A developed  
mentality*

*~Elaine~*

With the organization and dedication that I knew was needed, I took full initiative as president in 11th grade to develop the program into a place where others can find the same sense of genuine belonging and ambition that I felt when I first joined robotics.



I can't deny that I had insecurities taking upon robotics again in 11<sup>th</sup> grade due to the fact that I only had notebooking experience in the past. While learning how to build the robot myself, I had the responsibility of guiding new inexperienced people in the process as well alongside male peers who raised doubts in myself that I was incapable of mechanical skills. Although I faced intimidation from their outspoken, extroverted nature regarding their capabilities, I wanted to be strong for the other girls on my team and had a higher call to action that transformed my insecurities into the humility needed to learn and grow more as an engineer as well as the firmness to withstand against condescension from others.

## *A discouraging beginning*

*~Sarah~*

I've been interested in STEM since I was little, but the robotics program at my elementary school was all male, with an exception of me, and I was isolated and my inputs were diminished because of it. I didn't pursue robotics until 8th grade when I felt comfortable joining since some of my female friends were in the program. I taught myself how to program for vex and quickly fell in love with the program, yet still lacked confidence to speak up for myself. My team went to worlds that year and I didn't even go to the girl powered meet up because the boys on my team didn't want to and I wasn't confident enough to stand up for myself. For a long time I thought the self doubt I experienced was just a personal problem, yet I soon realized my lack of confidence came from lack of representation of females in STEM. I distinctly remember one interview with a judge where they were surprised by the fact our middle school team even had almost as many girls as boys. While the judge was happy at our inclusivity, the revelation of the disparity of girls in robotics was disheartening.

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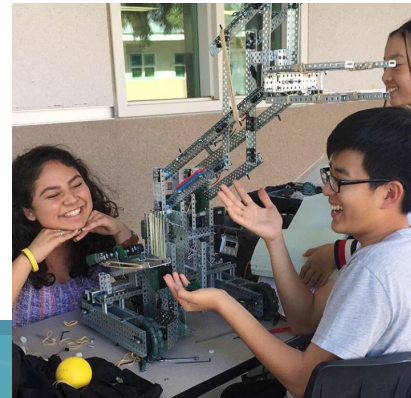
# *Where we are now*

Empowerment to Equity



## *Our team*

Having an all female team got our foot in the door, but was far from the final step. Empowerment was only a means to reach our ultimate goal, equality. We had evened the playing field, but what we really wanted was to play on the same team. So this year we have a co-ed team where we welcome diversity in an integrated setting where the only limits are not one's background or personality, but one's imagination and ability to problem solve.



*My  
Metamorphosis*

*~Sarah~*

Going into high school I was ecstatic to find I'd be on the all female team, one out of three of our other co-ed teams that would focus on highlighting the talents of females. I found the environment of my new team liberating and not only was I able to expand my skills as a lead programmer but also my interpersonal skills regarding team dynamics. I was no longer held back by stigma and could focus on what I really cared about, robotics. This year I continued my role as lead programmer as we transitioned back to a co-ed team, where after focusing on empowerment the year prior, we moved on to our next goal: equality, a team where all that mattered was what was in your mind. Having been on an all female team gave me the confidence to step into my own. I took command of my position, taking over teaching newcomers and helping programmers from all four teams. I had a new mentality where I trusted my expertise and didn't doubt myself for being a girl. It's hard to believe I ever doubted my capabilities, considering I got two concussions this year and still actively contributed to my team, which just goes to show girls can do anything they put their mind to, even if their mind is facing some technical difficulties.

“

## *Jin Woo*

Our robot and club wouldn't be what is today if it wasn't for my female peers.

Beyond just their gender,

I see no reason why girls shouldn't be hesitant to join the stem field.

Working side by side with them made me more cognizant that neither gender is better than the other and we could learn from one another. For example, having a variety of perspectives



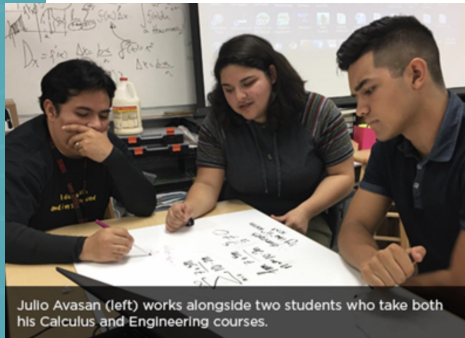
Fig. 1.4 (above) JIN WOO PARK looking offended after hearing someone say that they don't believe in gender equality



*Our role  
model:  
Mr. Avasan,*



My biggest role model is my engineering and calculus teacher, Mr. Avasan. As the advisor for robotics, Avasan was the first person who taught me to believe in my capabilities as an engineer. When engineering became a bit overwhelming, his wisdom helped me to regain the stronger mentality that I carry to this day in everything I do to withstand adversity and my own doubts. Thank you Avasan.  
-Elaine Llacuna



Julio Avasan (left) works alongside two students who take both his Calculus and Engineering courses.

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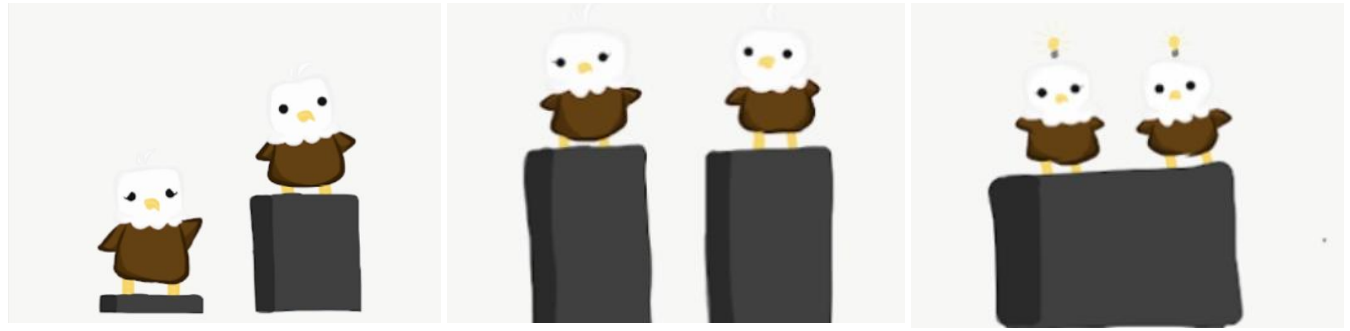


“There’s a gender gap in any STEM field that must be stopped. As educators, we hold an important key to make sure female students have the opportunity to participate and equally represent the world of engineering. We’re all represent one community, and as such, we must start the change.”

- Julio Avasan

## *Final Thoughts*

It isn't enough to change the way girls see themselves, we also have to change the way the world sees girls. Our goal is to actively support and encourage girls, and anyone for that matter, to join STEM programs, regardless of where they come from because robotics is about where we're going.





## *Credits*

# Team 9682A

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Artist: Sarah Yager

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