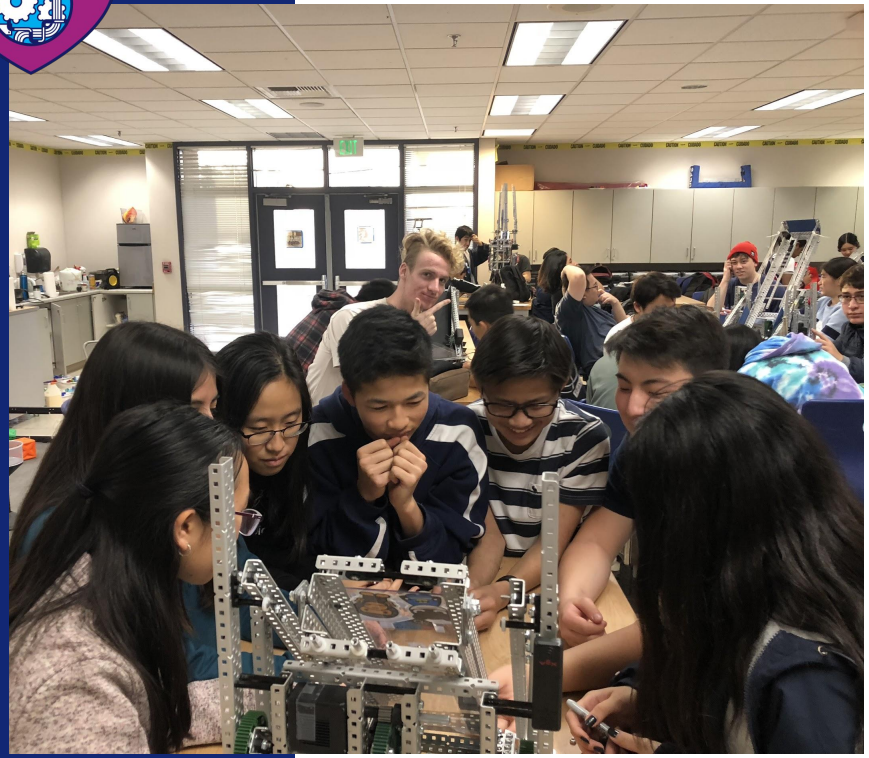
girl powered.

towering and taking over

2496J

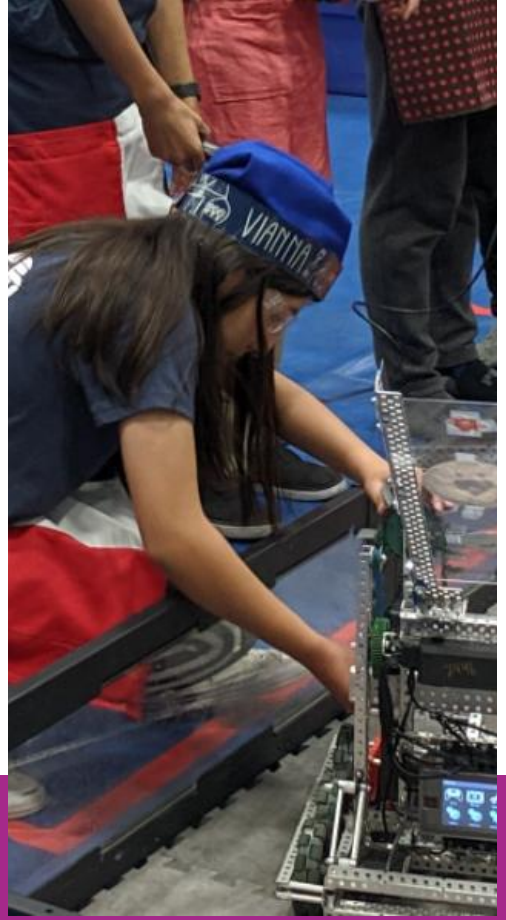
“Preloading” the Power

From time to time, the idea of “Girl Power” has often been **undermined**. Female figures do not typically dominate professions, particularly within the STEM fields and even in VEX Robotics. To change the outlook of female participation, we have recruited both girls and boys with a common interest in robotics. The Beckman Robotics program offers a means of **learning, collaboration, and fun**! Each year, more girls have joined the team, and many are **inspired** to stay for the remaining years of high school as well!



You can’t spell “inclusion” without “us”!

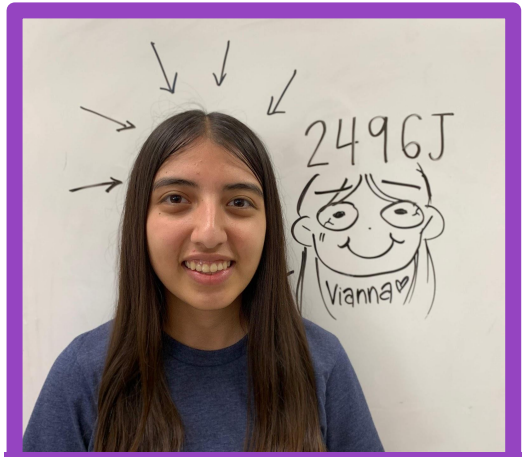
Inclusion comes **without question** in our team and the program as a whole; each year, there are both new members and returning members. At the first meeting of the season, we began not by discussing how to construct the robot, but rather with an ice breaker! This enables us to get to know our team members better and welcomes the newer members into the program. As the season progresses, we are able to use our **connections** to our advantage; this comes in handy when we are making our decisions for the subsystems of our first robot. Our newer members are no longer afraid to voice their opinions- the more we **embrace each others’ ideas** and **collaborate**, the better our robot is designed!



Discovering Your “Skills”

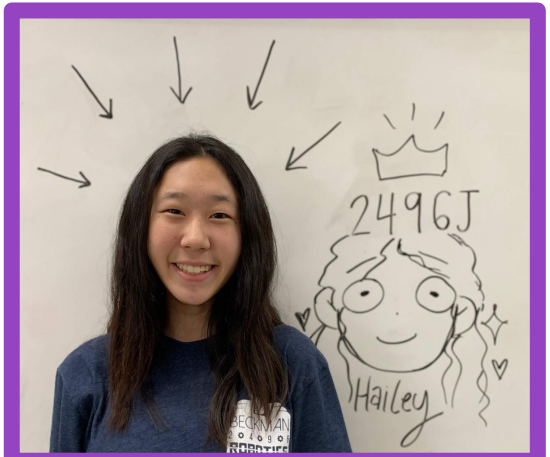
Over the course of the season, each team member is able to discover their own **strengths**- whether it be organizing the notebook, driving, programming, or building the mechanisms on the robot. In order to help everyone learn new skills, we have taken the **initiative to teach each other when at our best**. We look to other team members for **advice** and tips; for instance, when Vianna is coaching, we ask her for advice on strategies and tips to manage time during the match!

“Towering” Over with Leadership: Our Seniors



Vianna

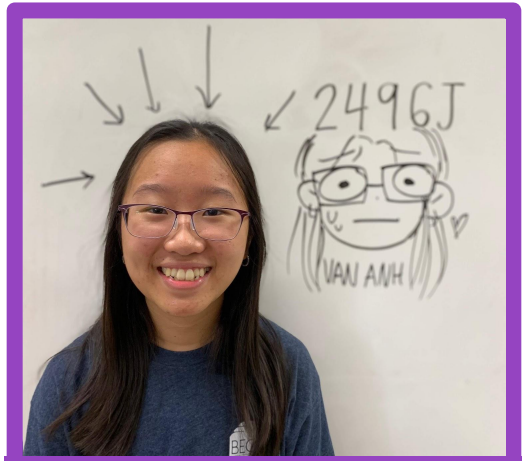
Vianna is a senior member of the team and this is her **fifth year** in robotics. She is also a **coach** on the primary drive team. This year, her focus is on **building, designing, and passing on knowledge** to the less-experienced members!



Hailey

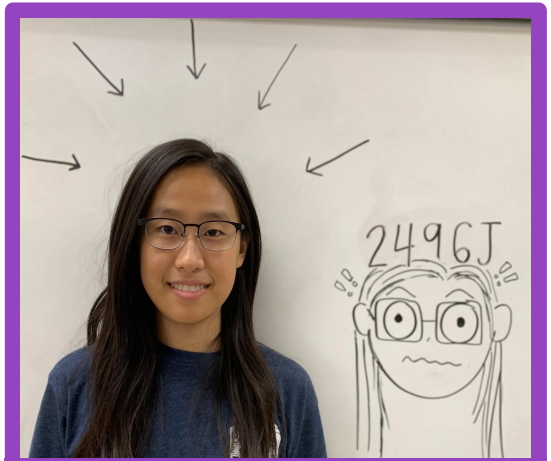
Hailey is a senior member of the team, and this is her **third year** in robotics. This year, she is primarily a **builder** but has also become increasingly involved as a **programmer**, especially in regards to the **autonomous**.

Other “Brains” Behind the Robot: Juniors



VanAnh

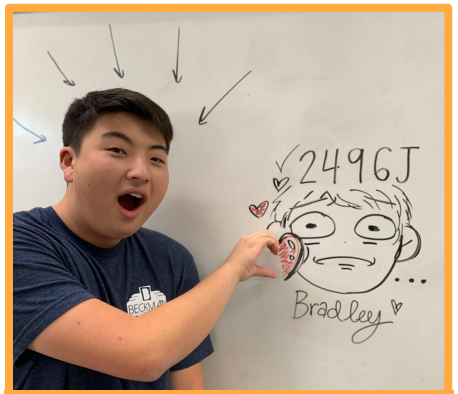
VanAnh is a junior, and this is her **third year** in robotics. This year, she is the **documentation manager** and has explored new roles by becoming one of the **coaches** of the secondary drive team and serving as a **scout lead** for the team at various competitions.



Jessica

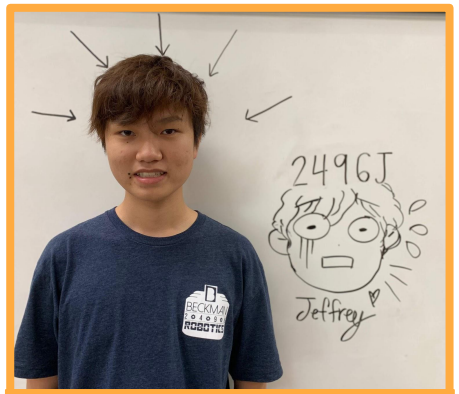
Jessica is a junior, and this is her **first year** in robotics! She is primarily a **designer, builder,** and **documentor**, along with being a **secondary drive coach**. This year, she, with the aid of more experienced team members, is learning about the exciting world of robotics and engineering!

2496J: An “Alliance” of Girls and Boys!



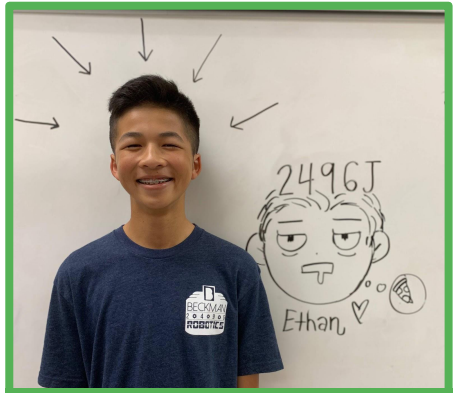
Bradley

the master builder & coach!



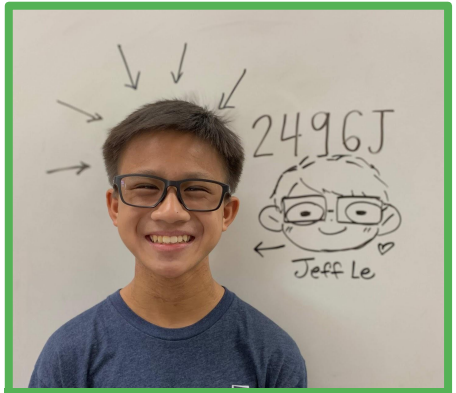
Jeffrey

the genius behind the auton!



Ethan

the talented man on the build!



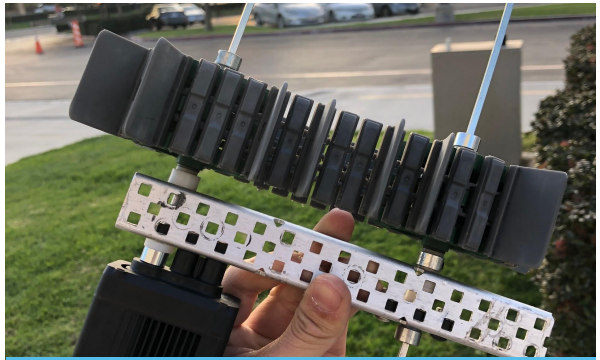
Jeff

the star of the skills & drive!

Competition “Cubed”!

After qualification into the state competition, we formed a secondary drive team (VanAnh, Jessica, Ethan) to allow **newer members to directly experience coaching and driving in a competition environment**. It is here that team members can say that they’ve had the opportunity to take on a **new role**, and learned how to **strategize** in a timely manner during the match.

Perspectives + Teamwork = “Autonomous” Success!



Design

Diversity of perspective allows us to carefully consider the design decisions that we make as a team. We are able to formulate an idea of our ideal robot by **combining** everyone's opinions, and **welcoming** every idea.

Team Chemistry

Varying viewpoints lead us from one idea to the next, occasionally to the extent where we make **jokes**! For instance, in a discussion about wire management, we turned to the topic of Airbenders (and “Wire-benders”) in order to make a tedious task into a **fun team project**!

Success!

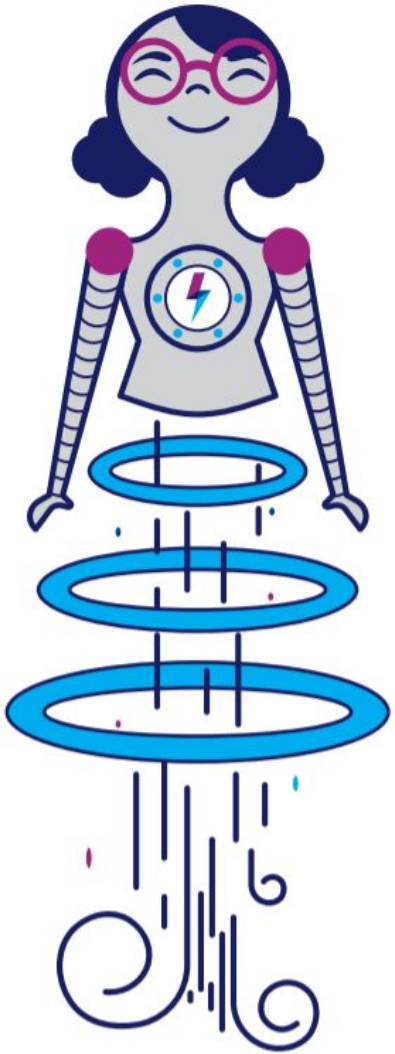
Collaboration has contributed to many successes throughout the season. In return for our many skills practices, autonomous runs, strategy discussions, etc., we have received **3 Robot Skills Champion Awards, 2 Tournament Champion Awards, and 1 Excellence Award**!

Mrs. Williams

Our inspiration for all things Girl Powered!

As a Teacher on Special Assignment (TOSA), Mrs. Williams **supports and trains** teachers who teach Career and Technical Education (CTE) classes. This includes a variety of Project Lead the Way (PLTW) classes at the middle and high school level including Automation and Robotics.

She **coordinates** the competitive VEX Robotics programs at **all 28 Tustin Unified District schools**!



"It is my dream that all TUSD Robotics students are **inspired** to see that a **successful career** can be built using knowledge gained from the STEM disciplines. Whether students plan on attending an engineering or robotics program at the university level or they want to become teachers who work with STEM students, there are many different career choices when you have a STEM background. I hope that the **girls** within TUSD Robotics might be inspired by the fact that **a female built and supports this program that is important to so many STEM students** in our school district. **Females in STEM** can really make a **difference** in the world, in companies, and in the classroom by bringing **diversity** and **new ideas** to the STEM field and STEM education."

- Mrs. Williams

Inspiration “STEMS” from Mentorship!

Thanks to **Mrs. Williams**, we are able to find **inspiration** through participation in the robotics program. Her dedication has founded our district’s teams and motivated us to become a **part of the change in the gender gap**.

Special thanks to our mentor, **Mr. Sit**, as well! He has dedicated **countless hours** to the program, coordinates our tournament dates, **advises** us with difficulties in our build, and **encourages girls (and boys) to have fun in the program**!

Every year, the number of girls in our program has continued to increase!

Our hope is to **carry this trend** and promote the participation of girls not only in robotics, but **STEM as a whole**.

The Girl Powered initiative has played a role in making this change a **reality**, and we'll help its efforts.

The “Goal Zone” - Our Future Initiatives

Team members can promote robotics by telling their friends to join and become **interested**!

Continue to volunteer at local middle school tournaments, and mentor middle school VEX teams to encourage **female participation**!

In the future, we can try to host a Girl Powered workshop to **directly introduce** the Girl Powered movement to the public!

19%

2016-2017 Season

Nothing but Net...

38%

2017-2018 Season

In the Zone?

44%

2018-2019 Season

Turning Point.

46%

2019-2020 Season

(including 6 teams instead of 5 from the previous year)

Tower Takeover!

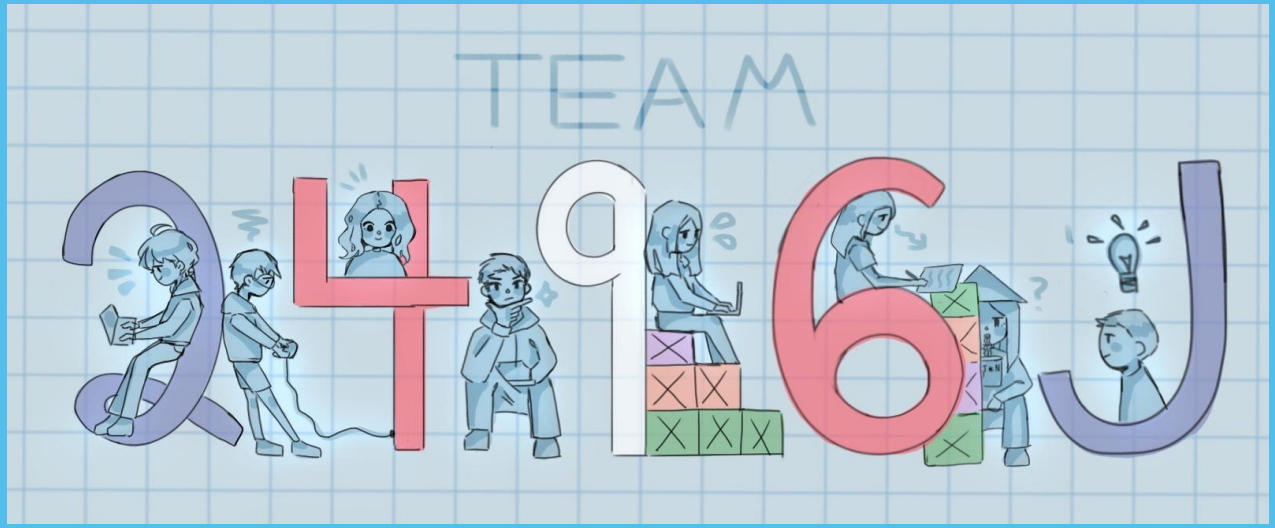
We started off with **“nothing but net.”**

The following season, we were **“in the zone.”**

The season after, we reached a **“turning point.”**

Now, it’s time for a…

“tower takeover”!



Credits!

Entrants: VanAnh Nguyen, Jessica Dai, Vianna Seifi, Hailey Park, Bradley Okajima, Jeffrey Han, Ethan Yee, Jeff Le

Team Number: 2496J

Title of Submission: Girl Powered: “Towering” and “Taking Over”