

PART I



STARSTRUCK: NEW HOPE

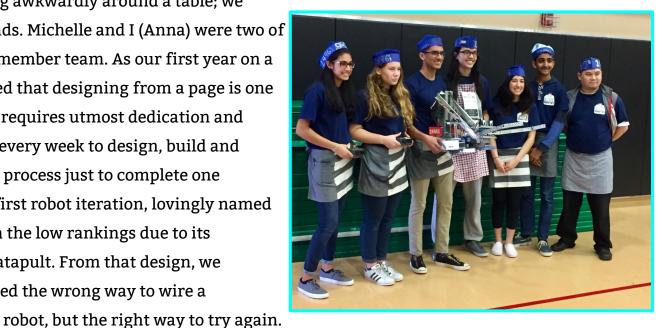
THE ORIGINAL + 2496X +



From Left to Right: Mr. Sit (Mentor), John, Kaeshav, Shaan, Anna, Michelle, Misha, RJ

THE ROAD TO STATES

We started the season sitting awkwardly around a table; we ended the season good friends. Michelle and I (Anna) were two of the three girls on our eight member team. As our first year on a high school team, we realized that designing from a page is one thing, but bringing it to life requires utmost dedication and perseverance. It took hours every week to design, build and meticulously document our process just to complete one successful robot. Our first robot iteration, lovingly named Steven, landed us in the low rankings due to its inaccurate catapult. From that design, we learned the wrong way to wire a



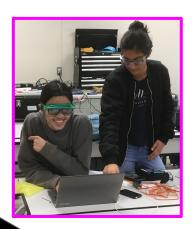
BECKMAN'S FIRST STATE CHAMPIONS



Our second version, named Steve, was infinitely better, (not only because of the googly eyes I stuck on him), but because of our improvements for efficiency. In the following regional competitions, we placed in the top ten and reached the finals, but it still wasn't enough for us. Steve still wasn't perfect. In the competitions with Steve, we won awards for our notebooks, but not our actual robot, which granted us a spot in the State championship. From Steve's losses and wins, we crafted our final creation for the state championship: Stefan.

And we won.

OUT OF THIS WORLD



MICHELLE + RJ

Due to our state win, we were lucky enough to attend the 2017 VEX Robotics Championship. We were amazed by the incredible people we met and forged strong bonds with our fellow teammates. Our mouths dropped in awe as we entered and toured the mile-long venue. I remember my heart thumping as hundreds of eyes watched me place our robot onto the playing field. I remember my cheeks aching from smiling too hard when we won our match. I remember my calves throbbing as I ran up and down the endless rows of pits, where teams feverishly prepared their robots. But it was all worth it.

In the end, we were proud to see the hard work we put into the robot pay off. We were able to go up against the best teams in the world and still hold our own. While we didn't end up where we had wanted, we learned the value of teamwork and gained inspiration throughout

our journey to Worlds.



WHAT WE LEARNED

During our time on the team that year, Michelle became a better programmer and I learned the art of documentation. We worked hard with our team and eventually gained the reputation of giving amazing interviews and having a great notebook. Being surrounded by boys was not a problem, because we always placed our input and contributed to the robot design. However, that isn't always the case. We were the lucky Beckman team that had more than 2 girls. We couldn't help but wonder why there were so few female members on all of the Beckman teams. There were 7 girls out of 32 members in total. 22%.

We want it to be fifty percent. Even though it seems small, only 11% of engineers are women. This means our program was actually more representative than the actual workforce: a big problem that **WE** want to change.



PARTITO IN THE ZONE: SURABHI STRIKES BACK

GIRLS GALORE

The next 2496X had a similar origin story. The game was In the Zone. Eight nerds sat around the table and started brainstorming. But, there were seven girls and one guy. Michelle and I remained on the team, and as experienced members, we emphasized teamwork as our main goal throughout the season. Every member participated in every aspect of making the robot. Michelle began to fully grow into her programming skills and became the lead programmer. I started growing as a designer and worked on my interview skills. One of our current members, Surabhi, joined the team that year.

She started high school robotics during her freshman year, in which her team consisted of all boys and her. Surabhi's experience in robotics that year was unpleasant. The boys on her team treated her with little respect and called her names such as "Secretary". At the end of that year, she left discouraged about robotics overall, as many women in STEM fields feel. Recognizing that, Mr. Sit transferred Surabhi to Team X some of our current teammates

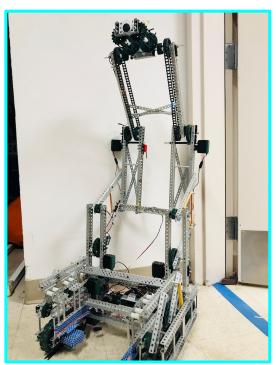


as well as others. That year, she was given more opportunities became one of our lead builders and ended up driving at competitions.

FAILURE UPON FAILURE

During our year, we competed at many tournaments. The highest we reached was 3rd place and the lowest was 25th. Each time we went into a tournament, we entered hopeful and left with new problems. But, each time, we fixed the problems and tried again. Unfortunately, we did not end up going to the State Championship, but instead walked away with new work habits and determined to do better next year.

One important key thing that we found that year was the importance of Girl Power. As a mainly female team, we were able to discover the advantages and disadvantages of being girls in a male dominated venture.



IN THE ZONE

We had to sit through the inappropriate jokes from other teams and the stigma that comes from being an all girl team. We weathered all the jokes and judgement through each other. All of us depended on each other and we grew to be close friends. Our closeness led us to be encouraging of all ideas and lean on each other when times became difficult. Although we didn't win the award we wanted to get us to States, we won each other. And with that attitude, we won the California Girl Powered Competition.





PART IIITHE GIRL POWERED TEAM



MEET THE TEAM



From Left to Right: Taruna, Genevieve, Dani, Megan, Surabhi, Meghana, Anna, Michelle

Not Pictured: Shrishti

A TURNING POINT

The abundance of possible strategies in Turning Point makes it a challenging game, however that pushed our team's creative bounds. We were able to troubleshoot flywheels, punchers, various claw iterations, and build our first double reverse four bars.

Motivated by our lack of state qualification for In the Zone and being the only Beckman team not qualified for states for Turning Point, our team was determined and became stronger.

The November 17 arrived. Our third regional competition of the season. But we were ready. The tournament initially disappointed us as one of our lift motors burned out. With only 5 minutes until our next match, 6 pairs of hands simultaneously repaired our robot. For the newer members of the team, this was a stressful scare. But for Anna and I, it was the catalyst to our goal for qualification.

Finals were intense, taking the referees a nail-biting 30 minutes to come to a conclusion. In the end, the referee announced 2496X as the tournament champions, and the emotional, sweaty night of November 17th transformed into a memory none of us would forget.





THE RISE OF THE GIRLS

November 17th proved to be a win for not just 2496X, yet for all of Beckman as well. As a program, we took home Design, Think, Amaze, Programming Skills, Innovate, and Design Runner Up Awards, demonstrating Beckman's robotics excellence and our team dynamics at its best.

The key to our success as a program is our positivity, inter-team encouragement, and innovative environment. The Beckman Robopatties has expanded their female representation over the years, and is now at an equitable 42.5%, in which 17 out of our 41 members are girls. However, none of this would be possible without our amazing mentor, Mr. Sit.



OUR MENTOR

"A good mentor is hard to find, difficult to part with, and impossible to forget."

We are eternally grateful to our mentor Mr. Sit for all the life and robotics knowledge he has passed down to us. Every day we work on our robot, he makes us laugh and pushes us to do our best. He has inspired us to push our limits in order to become the best possible versions of ourselves. Without him, many students at our school would be left without a place to belong. He has turned us into strong leaders instead of the meek freshmen we were when we first

entered his classroom. He has crafted a second family for us and left a positive impact on each person he has taught. Mr. Sit works to make an inclusive environment

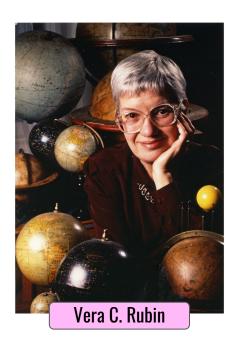


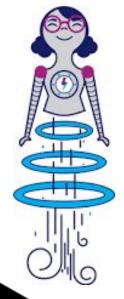
for **EVERYONE** and encourages us to do the same.

STRONG WOMEN WHO INSPIRE US









WHAT GIRL POWERED MEANS TO US

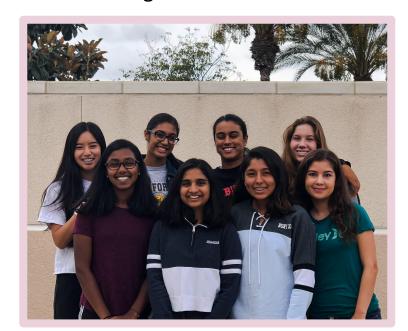
Being Girl-Powered is a motivation that strives for better in the girl community.

Being an All Girl robotics team, motivates our team to bring out the best version

of ourselves,

not only to prove ourselves to others,

but to grow amongst our own mindset.



SPREADING THE #GIRLLOVE

We don't spread girl love only for the demand of jobs in the real

world, but we spread girl love for these young women to be able

to pursue their interest in VEX and STEM.

Our team spreads girl love by volunteering and help the

younger teams that need support in the VEX program. Not only

do we spread love inside of the VEX program, we step outside,

and promote the interest of rising engineers.

"Strike me down, and I will become more powerful that you could possibly imagine."

-Obi Wan Kenobi



THE AUTHORS



ANNA



MICHELLE

WITH HELP FROM OUR TEAMMATES♥