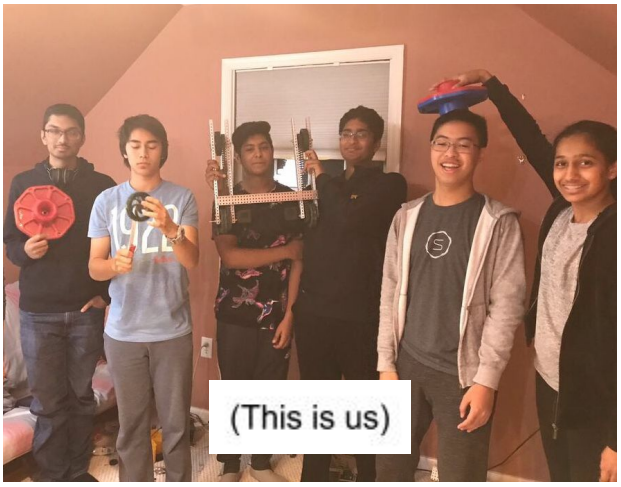
750E(volution) - Our Evolution

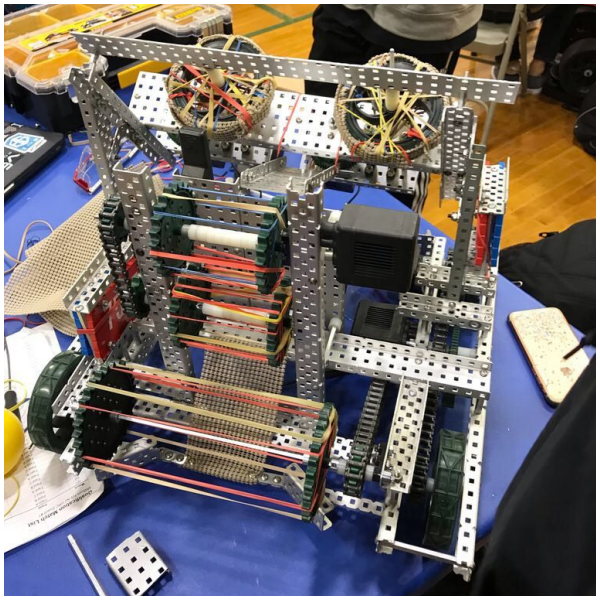
Of all of the members of team 750E, only one of us had prior robotics experience before joining the team. But if you were to attend one of our meetings, you could not tell who this one person is. On our team, our core belief is that every person is just as capable as the next, regardless of past experience. From the members in their fourth year to the newest freshmen, everyone can design, build, program, or do any task they believe they can do to contribute to the team.

To us, “Girl Powered” means that everyone powers the team, and every single person plays a significant role in accomplishing a common goal. One person’s skills should not be disqualified only because he or she is new to robotics. In this way, we create a welcoming environment to new members and make sure that they are not afraid to contribute due to their lack of experience. We want to make sure everyone feels useful.


(This is us)

In the beginning of the season, we started off as a group of strangers, bound together with nothing more than a pure love for robotics. Our team members consisted of people that wouldn’t have dreamed of talking with each other outside of the robotics club. It was quite a sight to see a group of boys and girls consisting of varsity athletes and musicians to dancers and straight-A students get together in one room for one common goal: to build a robot.
Despite our distinct personalities, we attempted to take our first steps in planning and building our first iteration of the robot. Even though we all shared the same passion, the “invisible wall” that alienated each team member from one another caused a lack of trust

and coordination in the team. We did not recognize the raw talent present in each teammate in our attempts to manifest our own individual ideas. We often discounted each other's ideas when it came to designing the robot with excuses such as seniority and being a "builder" rather than a "programmer". It was this conceited nature that impeded on the team's progress. While other teams from our school flourished, we wound up with an unfinished robot that was the devastating combined result of our diverse ambitions and judgemental nature.

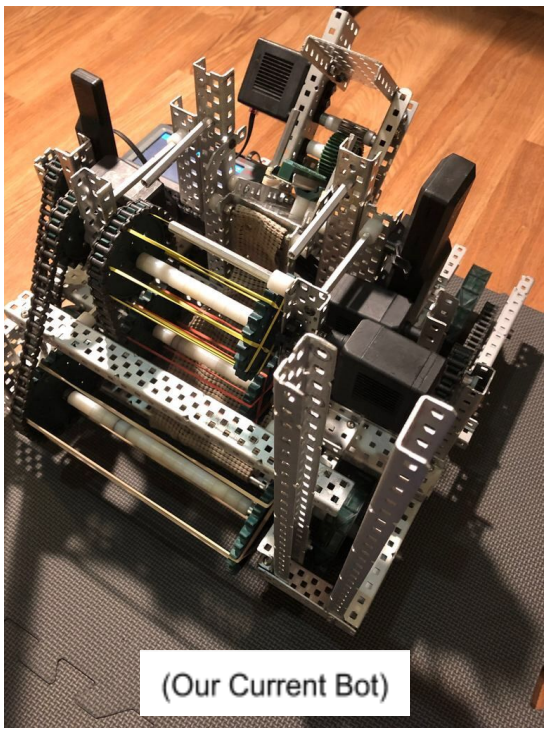


(Our first iteration of the robot, which had many issues since we had not fully agreed on the design)

It was at this point where we all realized that our way of functioning was clearly inefficient. In order to be successful, we had to learn to get past our differences and work together. Almost instantaneously, the seemingly unbreakable "invisible wall" dissolved, leaving behind a permanent bond between the individual team members.

(Us working together)

Originally, we based our team dynamic off of the experience of team members. The more experienced a team member was, the more we paid attention to his or her thoughts and opinions. In other words, the quality of one's idea was directly correlated to age. This had a destructive impact on the participation of each student, as the fear of being judged prevented the younger members to be transparent in their opinions. After this moment, our team was never the same. We got rid of our impeding ideology and immediately our teamwork improved. Our cool facades melted into strong friendships that proved to be a wonderful ground for new ideas and innovations. It was like the pieces of a puzzle clicked together. We tasked all members, putting emphasis on the newer ones, to do research on possible systems we could build and come up with a plan for our robot. Visible changes in our performance and efficiency were apparent as a result of our teamwork.


(Our Current Bot)

Whereas our original iterations of the robot were inefficient due to a lack of agreement for the design, our current robot is a result of the combined ideas of each member. We spent a lot of time compiling everyone's opinions, discovering that some of the newer members were excellent strategists in the process. Moreover, we uncovered some flaws in the ideas of the more experienced members that would have remained hidden. On top of benefitting the team, our open environment allowed each member to have a voice and learn in the process. In this way, our team is unique from other top teams in vex robotics; the gap between the senior and junior team members is nonexistent in 750E, allowing our success to be credited to each member equally rather than a fraction of the most superior members. Throughout these past few months of hard work and dedication in such an accepting atmosphere, our individual team members have grown astronomically in terms of their skills in both programming and building.

Recently, we have received a few new members on our team that we hope to train. Our cycle has repeated, given that the previously new members from the start of the season have grown in their skills and are more experienced then the newest members. Once again, we have to overcome judgement and make sure to incorporate ideas from new teammates despite their lack of experience. However, this time, we knew not to repeat the same mistake as the beginning of the season. Instead of letting older members

take control of all major decisions, we are applying more democratic principles within the team and we are making sure to incorporate our new members in every decision we make and discussion we have. This way, we are hoping to welcome our new teammates and make sure they are not intimidated by their lack of experience to voice their ideas. Eventually, the newest members of our team transition from inexperienced to experienced without even noticing their drastic growth.

(One of our new members coding)

Ultimately, this season has taught us the importance of involving all members regardless of their background or level of experience. By levelling the playing field for all team members, we eliminate the concept of "deadweight" team members and allow them to grow in their skills in all fields of robotics as well. We began shifting people around as our team progressed and developed our skills. At one point, a good programmer switched to being an amazing builder! Experiences like these Our girl powered approach to robotics has revolutionized the way we function on this team, because in essence, robotics is a team activity. Although we are not perfect as a team, we believe that our open mindedness will allow us to get very far in competition and improve as a whole and individually.

Credits:

Entrants: Aashvi Manakiwala , Evelyn Fu, Dale Nacianceno, Arnav Nayak, Debesh Sahu, Abhiram Tamvada, William Yoshida, Zareeb Chowdary, Meghna Shenoy, Shailee Goradia, Sridaran Thoniyil, Arnav Deshpande

Team number: 750E

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