



ENGINEERING A BRIGHTER FUTURE
TEAM NEWSLETTER



INSIDE THIS ISSUE

- SUMMER SOCIAL
 - ROOKIE INTEGRATION
 - WINGS OVER CAMARILLO
 - BACK TO SCHOOL NIGHT
 - OC MAKER FAIRE
 - VEX PREPARATION
 - FRC PREPARATION
 - VRC CLASH IN THE CANYON
-

FIRST ISSUE!

Welcome to our first-ever Robodox Newsletter for this year! Overall, our team

has been incredibly productive as they explore efficient ways to prepare for both the FRC and VRC competition seasons within the first two months of the year. We are grateful to all our mentors, parents, and sponsors for constantly giving time and support to our team! Let us engineer a brighter future together!



ROOKIE INTEGRATION

TRAINING ROOKIES!



WHAT IS ROOKIE INTEGRATION?

Rookie Integration plays an integral part in our team's training, ultimately helping us carve out two weeks from our schedule to give a brief introduction to each technical and administrative subteam. This includes CAD, Mechanical, Electronics & Pneumatics, Programming, VEX, Business, and Logistics.

How was Rookie Integration?

Rookie: "[It] was nerve-racking but in the best way possible. Everyone was welcoming toward us rookies, and they took the time to explain what their roles were, not only in their subteam but also in the team as a whole. Because we were introduced to all divisions, I have a better understanding of how the team functions, each being like a gear fitting somewhere in the Robodox machine."

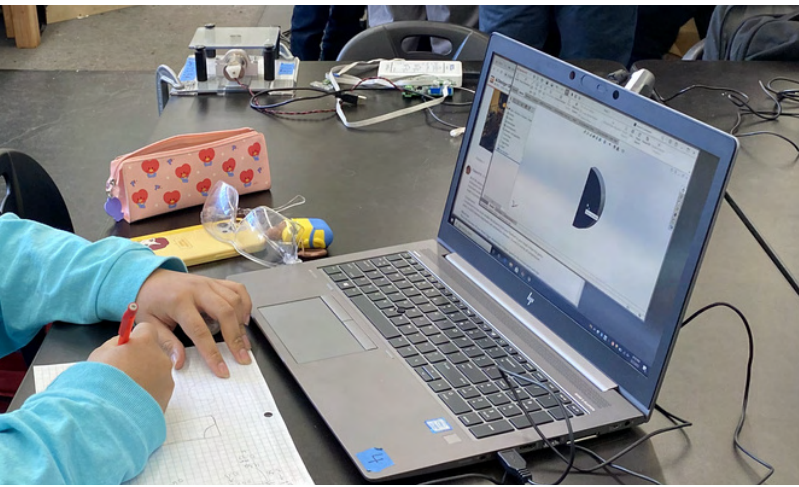
TAKEAWAYS

Rookie: "During Rookie Integration, I was introduced to the team members and taught how each subteam is important to the success of the team as a whole. From the importance of communication between each subteam to the trust in each team member to complete their job on time, the team really works together in such a fascinating way."



ROOKIE INTEGRATION

TRAINING ROOKIES!



CAD

For our CAD division, the veterans taught the fundamental SolidWorks functions to our rookies. They also walked them through designing different gussets used for our robots as an introduction. Gussets are pieces of metal that act as the reinforcement between two major metal parts.

MECHANICAL

As for mechanical, rookies experienced basic training to operate the laser cutter, bandsaw, mill, lathe, and drill press. Veterans also took the initiative to teach them general rules and procedures as they fabricated parts.



ROOKIE INTEGRATION

TRAINING ROOKIES!

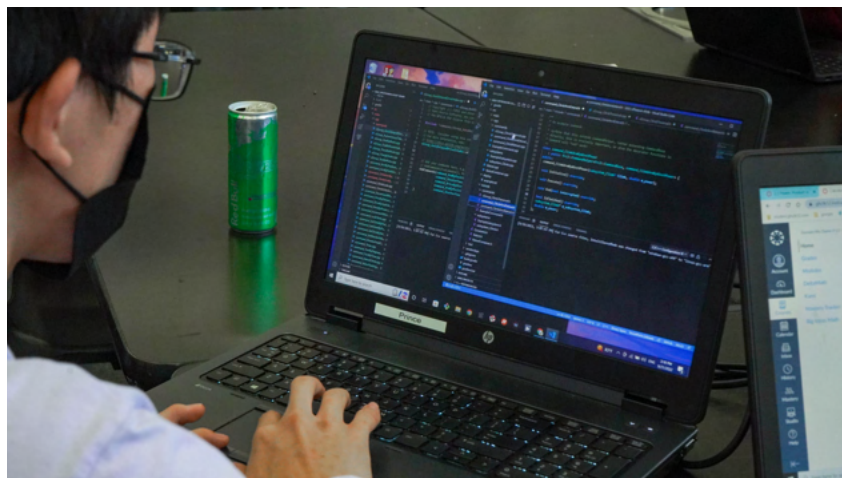


ELECTRONICS & PNEUMATICS

E&P taught the functions of each component of a basic electronics board for our robot to our rookies. Consequently, they showed them the anatomy of our belly pan to visualize its structure. They also conducted a hands-on activity with soldering.

PROGRAMMING

In the programming division, they taught the basics of C++, the programming language we use for FRC. Additionally, they discussed the key terms they use with the software. Other than coding, they also showed the rookies the application of the code with FRC game videos and prototypes.



ROOKIE INTEGRATION

TRAINING ROOKIES!



VEX

The VEX Captains led the introduction of building a simple VEX robot. With this, they created prototypes made from scrap metals, wheels, shafts, and chains. After, all robots competed against each other to document future steps for improvements. The idea behind this activity was to allow the rookies to fix their mistakes for the future, ultimately making this a memorable experience!

BUSINESS & LOGISTICS

Both subteams had their presentations led by their respective executives, who gave everyone a brief introduction to the divisions they handle. Our business and logistics executives discussed the roles and expectations for finance, public relations, awards, outreach, events, and operations, which helped our rookies decide which administrative group they want to focus on.



ROOKIE INTEGRATION

TRAINING ROOKIES!



PLUS

- Director of Finance

It was a very good experience and a seamless process during rookie integration.

- Rookie

I liked that every sub-team found a good way to include the rookies, like showing us a real hands-on activity that we might do if we joined them.

DELTAS

- Director of Finance

We needed more time to fit in everything because it felt rushed, but overall it was the best experience.

- Rookie

All of it was pretty good, but I feel like some subteams could have gone more in-depth about what they do and how they work. Some subteams didn't really need a whole two hours to explain what they did.

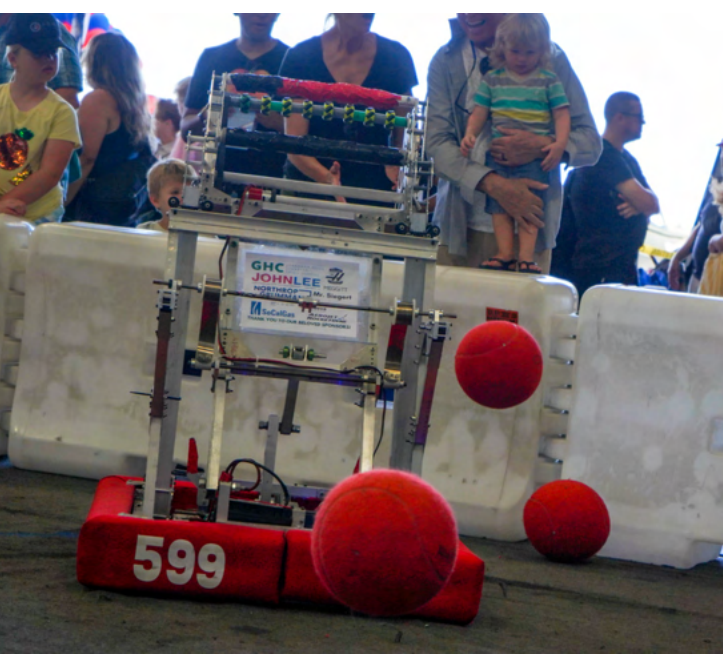


WINGS OVER CAMARILLO

FRC DEMONSTRATION UNDER THE AIRSHOW

RECAP

Having our first-ever FRC event of the year, we took a fair share of our rookies to spend time with the FRC community. As we drove around our 2022 FRC robot, *Ozzy the Ophthalmologist*, different team members were also able to test its west coast drive! Additionally, the team took initiative to network with numerous businesses around the venue, such as Meggitt safety systems, for future partnerships!



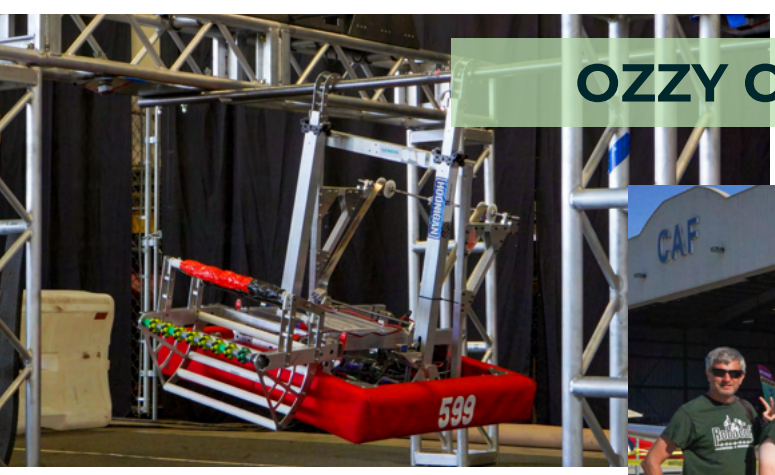
PLUS/DELTAS

This was a memorable event for us since our team got to see another perspective of engineering, which is aviation. Fortunately, our team's hard work paid off as *Ozzy* was up and running throughout both days showcasing our technical skills to the crowd. In the future, we hope to prepare two robots for demonstrations so that we can have one for our booth and one on the field!



WINGS OVER CAMARILLO

QUICK PHOTO RECAPS!



OZZY CLIMB!



TEAM PHOTO!



HELPING FIRST LEGO LEAGUE!



OZZY IN ACTION!

BACK TO SCHOOL NIGHT

SHOWCASING THE ROBODOX TO THE PARENT-BODY!



RECAP

This was the first chance for The Robodox to connect with the student population, and our members captivated the parent attendees with our 2022 FRC robot, Ozzy, together with decorative team flyers/posters. People from our team took the initiative to promote Robodox by networking and selling snacks across campus! Overall, the event was a great opportunity for rookies and veterans alike to spark interest in our peers and parents.

PLUS/DELTAS

This year, we had a very strong team to promote robotics throughout the school with signs and cheering. The booth had important information, such as business cards and a donation box.

The snack sales helped to boost the amount of money that was fundraised. To improve, it would have been great to exhibit how our robots truly work in a full demonstration.



BACK TO SCHOOL NIGHT

QUICK PHOTO RECAPS!

TEAM SPIRIT!



TEAM HISTORY!



TEAM INTRO!



FUNDRAISING!

OC MAKER FAIRE

FRC DEMONSTRATION @ ORANGE COUNTY!



RECAP

The OC Maker Faire was a one-day event hosting California's brilliant inventors, artists, and entrepreneurs who met together to showcase their futuristic inventions and ideas for tomorrow. This was an opportunity for The Robodox to network with other teams and companies to draw inspiration and create partnerships.

PLUS/DELTAS

Rookies were given the opportunity to drive the robot in the field and get a glimpse of what it's like to be a part of the drive team in the competition. In addition, our team was able to recruit one mentor and gather information from other companies for future contact. Next year, we hope to bring more of our team members and schedule more preparation ahead of this event.



OC MAKER FAIRE

QUICK PHOTO RECAPS!

OZZY IN THE FIELD



BUMPERS!



DOX TEAM SPIRIT

GEARING UP



VEX PREPARATION

OPERATING FOR THIS NEW SEASON!



VRC 2022 - SPIN UP

The 2022 VEX game, Spin Up, consists of two alliances with two robots each. The objective is to score higher points than the opposing alliance team by shooting discs into goals, owning rollers, and covering the field tiles.

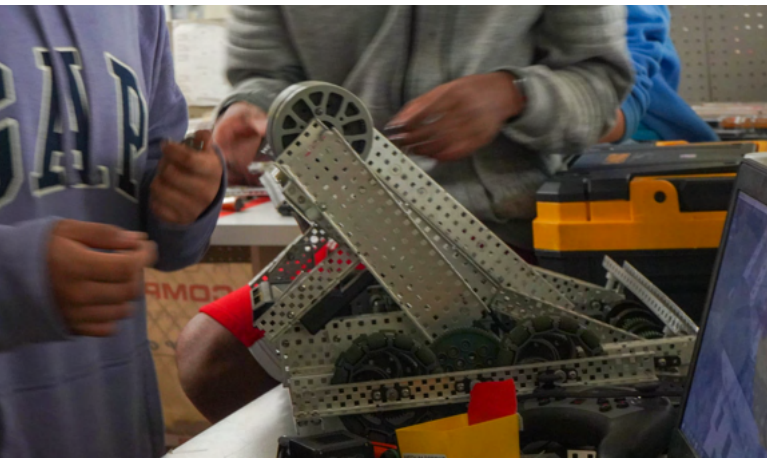
TEAM DYNAMICS

We have two VEX teams, 599A and 599B, with one team captain each. Although officially in separate teams, all members maintain a close relationship by working together to design, fabricate, wire, and program their robots. Overall, the new addition of a VEX Manager position and two separate captains helped the teams maintain efficient communication with the rest of the team in FRC and administration.



VEX PREPARATION

OPERATING FOR THIS NEW SEASON!



UPDATES

With only two total veteran members, both 599A and 599B have been continuing to teach and train their rookies. 599A is trying a more instructional approach, while 599B is trying a more hands-on method of teaching. Both methods of teaching are doing excellent as new rookies take on roles in the team and help push the team further.

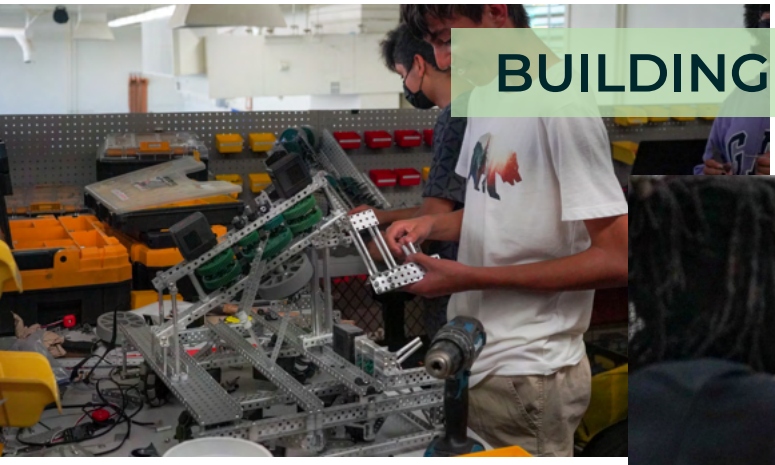
GOALS

For the season, 599B is hoping to finish their endgame and shooter. 599A wants to finish their design for the robot by their VEX manager. Both teams hope to achieve a robot capable of shooting into the high goal, using the roller in the game for bonus points, and finally, having an endgame design to score as many points as possible. Both teams want to learn from this first competition to boost their teams further and teach the new coming rookies important skills for the future.



VEX PREPARATION

QUICK PHOTO RECAPS!



BUILDING ROBOTS



ENDGAME TESTING



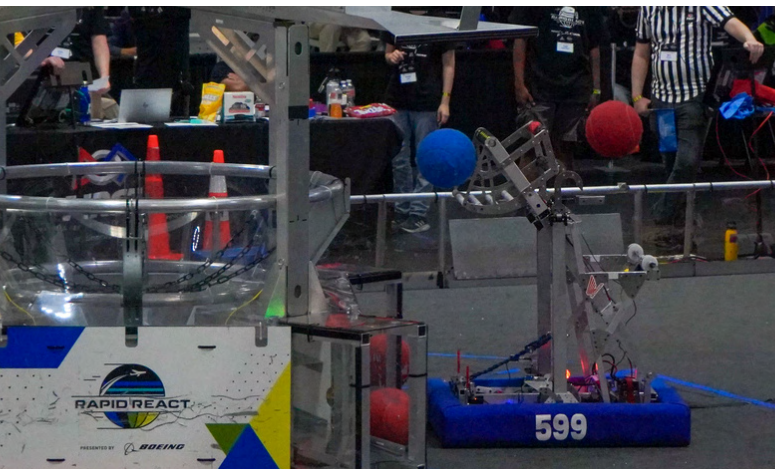
TESTING PROTOTYPES



DESIGN

FRC PREPARATION

OPERATING FOR THIS OFF-SEASON!



FRC 2022 - RAPID REACT

In the 2022 FRC game, Rapid React, alliances compete to load up cargo in the lower and upper hubs. Additionally, it also challenges the ability of these robots to traverse through different levels of rungs.

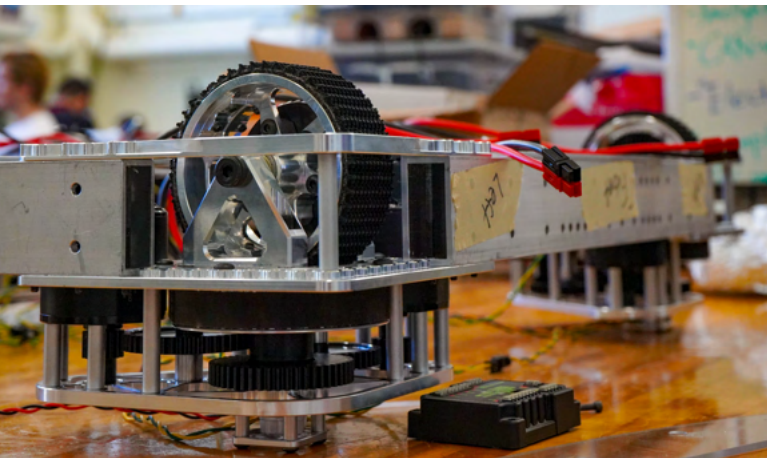
TEAM DYNAMIC

Having four divisions in FRC, our team follows the chain of command between their leads and executives. With this new system, the leads take up the responsibility to oversee all specific tasks of each technical subteam: CAD, mechanical, electronics & pneumatics, and programming. So far, the process of training rookies became more efficient as leads are focused on the technicalities of each subteam while their executives are overseeing its logistics and management.



FRC PREPARATION

OPERATING FOR THIS NEW SEASON!

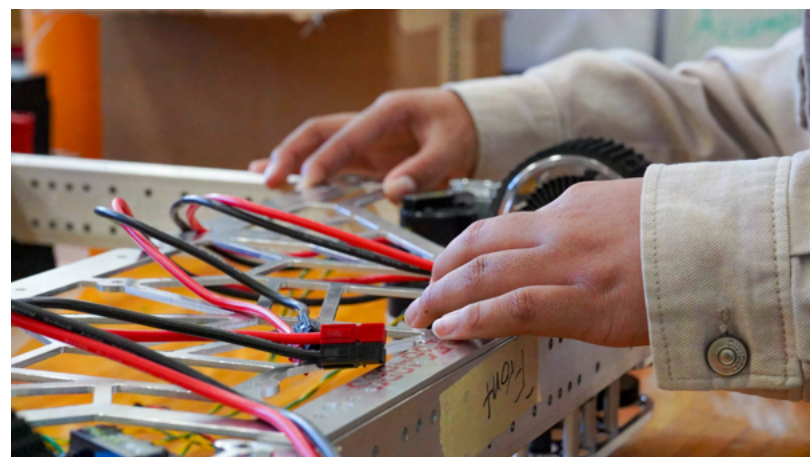


UPDATES

Our team took the initiative to explore subsystems such as a swerve drivebase, turret shooter, and computer vision system. This has been the most ambitious off-season project the team has undertaken. So far, our CAD and mechanical subteams have been working together to create drawings (blueprints) and machine parts for our new swerve robot. While parts are being assembled, E&P and programming have been preparing for their allocated testing times.

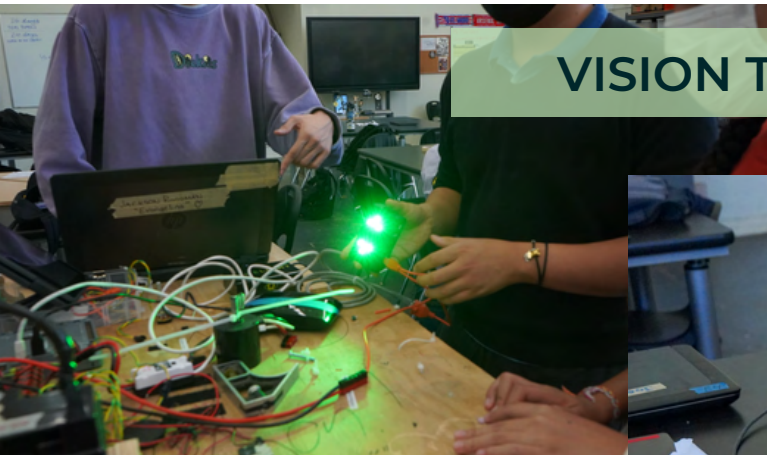
GOALS

Our goal is to finish calibrating the robot code and conduct driver practice during the week before our first off-season competition at Ventura, FRC Tidal Tumble. After this competition, we have a few days to make adjustments before FRC Beach Blitz the following weekend. Overall, we hope to maintain the team's morale so we can engineer a brighter future for this year.



FRC PREPARATION

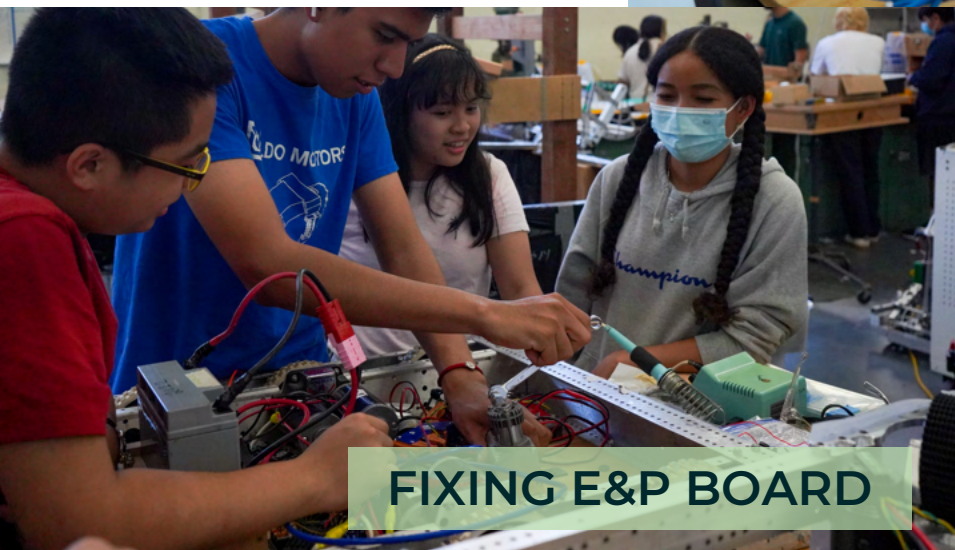
QUICK PHOTO RECAPS!



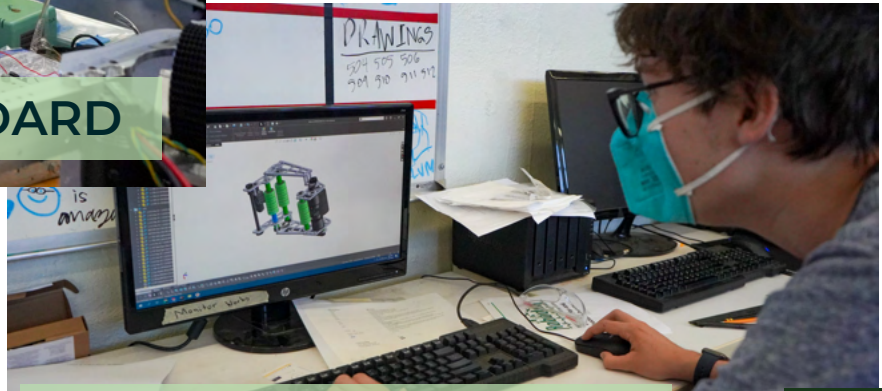
VISION TESTING



DUMMY ENP BOARD



FIXING E&P BOARD



PREPPING ASSEMBLIES

CLASH IN THE CANYON

FIRST VRC COMPETITION OF THE YEAR!



RECAP

After a restful summer, both teams came back refreshed and ready to pick up the pace of the 599 VEX teams pre-COVID time. Since day one, our VEX teams have tirelessly worked to prepare for Clash in the Canyon. Overall, both 599A and 599B started out strong as they traversed through the leaderboards, reaching 8th place (599B) and 12th place (599A) out of 32 teams! We are so proud that 599A won Tournament Finalist!

PLUS/DELTAS

Although both teams encountered challenges with their intake, as they had not fully refined before competition, they kept a positive mindset and pushed through the entire day. In the future, both teams hope to learn from Clash in the Canyon to further improve their team dynamic and robot function! Their next competition is looking to be in mid-November.



CLASH IN THE CANYON

QUICK PHOTO RECAPS!



RIISING ROOKIES



TOURNAMENT FINALISTS



599A INSPECTION



GEARING UP

SNAPSHOTS!

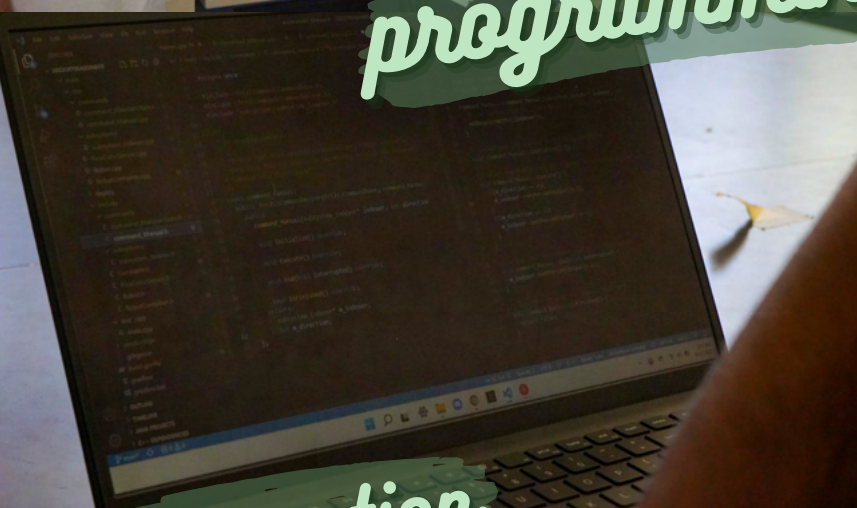
EARLY FALL SEMESTER OF THE 'DOX



Buying Materials



bandsaw



programming!



assembly



lathe action



599B on the field!

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