



MONKEY BUSINESS

News of The Funky Monkeys, Lynbrook High School Robotics, FIRST® Team 846



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- Co-President.....Justin Zhang
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Presidents' Welcomes



Justin Zhang (sr.)

Khadija Raza (sr.)

When I joined robotics in my freshmen year, I thought it was just a club about robots. But I quickly found out it was much more than that. My perception that robotics was a 'group of nerds' was shattered: instead, what I joined was a unique and supportive community.

Whether it be late nights debugging code or long design meetings, the team environment that robotics provides is different from any other club or class on campus. We are all working together to create a product we bring to competition, and that final joy of seeing your robot move around on the field is second to none. I still remember my first competition in San Francisco, the thrill of seeing 40 other teams, each with their own unique robots. Every single match played is not only a

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Welcome to The Funky Monkeys! I know that students are often drawn to the club after being amazed by a 120 lb, 5 feet tall robot zooming around. I know that students join because they are excited to be a part of the team that makes it happen in just six weeks. I also know that students can be daunted by this club just like I was.

I'm here to tell you that joining this club, even if it's intimidating, is an invaluable high school experience. Finding your place on our team is easier than you think. Perhaps you entered the team already interested in the software behind our robot or discovered that the electrical side of the team was intriguing after attending our Fall Workshops. Personally, I went from having no experience in robot design to explaining to judges

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Sunset Showdown

Phoebe Tang (jr.) and
Vyaas Baskar (jr.)

The inaugural Sunset Showdown competition, held on the flight deck of the USS Hornet, was a sight to behold! Walking up the steps onto the carrier filled me with adrenaline, as I had never seen or been on such

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Sunset Showdown, Continued...

a big ship, let alone competed on one. As I walked through the hangar there were many aircrafts on display. Going up to the deck, I walked up steep and narrow stairs. On the flight deck was the field, loudspeakers, a beautiful view of San Francisco, and the stands filled with excitement!

During the morning we were met with cold and strong winds which made pit set up more challenging as we had to make sure that our tent wouldn't fly away into the sea. The winds made the competition more unique, as teams had to adjust their strategies and play styles to make accommodations for the wind affecting how the game pieces would fly through the air. The sun also showed to be a problem, as most teams used the AprilTags which are like QR codes to help the robot to sense its location, but because they were covered in plastic that reflected light made it difficult to read.

As the sun was setting on the first day of competition I had the exciting opportunity to sleep aboard the Hornet! After, I had an unofficial tour of the lower deck, which included going through the war room, sick bay, chapel, the bomb room where they had displays of missiles, and where the ship's anchor chains were held, which were huge. Each link was about two feet long.

At the end of the night, I headed towards the cabin with rows of 3 beds, one on top of another held together by chains. Surprisingly, they were very stable, and I made friends with

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Justin's Welcome, Continued...

clash of heavy and giant metal machines, but also a clash of brains and of hard work.

But it's not just about the robots. Our large team has managerial aspects and business operations to run; and despite initial thoughts about these activities, I found myself enjoying this as well. These activities range from running a robotics club at Miller, to writing grant applications to fund future robots, to making graphics and posters to advertise our club. There's

I still remember my first competition in San Francisco, the thrill of seeing 40 other teams, each with their own unique robots.

much more to do than engineering, which was a pleasant surprise for me.

And in robotics, you'll actually find yourself making plenty of friends. Not just within the club but with your competitors in other teams.



Justin Zhang (sr.) on the field during the Idaho Regional.

Other freshmen are going through the same path as you in robotics, and you'll likely see a lot of the same faces at local competitions year after year. I pushed myself to talk to others and make new friends at competitions, and it's led to wonderful friendships.

But yeah, that's about it. Welcome to the robotics club! You'll make new friends, learn new engineering and business skills, and obviously, make robots!



The flight deck of the USS Hornet, where the competition was held.

Sunset Showdown, Continued...

another team in the same room before dozing off to bed. 7:00 AM I was woken to a loud Reveille through the ship's speakers. After breakfast and much needed coffee, I headed straight to the flight desk for another day of competition! One of the best things about the competition is the chance to meet other people from different teams and learn how they tackle the problem from a different angle! As the competition began to come to a close, we got an alliance photo to commemorate the awesome and unique experience. Before we left, I made sure to get a picture of the sunset for the record.

As Sunset Showdown came to a close our team won the Control and Automation award due to our unique solutions to various challenges. From the start of the off-season, we re-wrote our software to include a solution for shooting at any position

even while moving. By implementing these processes ourselves, rather than relying on what is provided to us by other existing methods, we are able to customize the code to our liking. An example of this is in our AprilTag detection code. While teams that used a Limelight, a premade product commonly used for tracking in FRC, were unable to precisely detect tags in

the outdoor setting of Sunset Showdown, we were able to dynamically pre-process camera frames, effectively combating the problem of outdoor lighting conditions. In the future, our team plans to add on to this by detecting game-pieces for an assisted-intake feature, and innovating even further.



Our 7th Alliance: Team 6662, Team 7245, Team 1619, and Team 846.

Basketball and Robotics

Tiffany Wan (soph.)

Being able to get MVP on our school's JV Girls Basketball Team during the winter of 2024 was a great experience, and can partly be attributed to my active participation with robotics. Despite the noticeable differences between robotics and basketball, my experiences in this club have greatly contributed to my journey of basketball.

Although the aspects of robotics are completely different from basketball, similarities in time commitment, and teamwork are abundant. I was able to explore solutions with other team members to solve difficult problems encountered during our six-week build season, where

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Khadija's Welcome, Continued...

different parts of the robot that I designed. Maybe you'll notice how our team is recognized for our unique and quirky visuals at competitions and know that the media subteam is the place for you. You might be impressed at how our team procures the funding to produce high quality robots and decide



Khadija Raza (sr.) installing the arm pivot on the robot

that the grants subteam is where you belong.

No matter your interests or experience level, I know that you will be able to find an aspect of our team that you enjoy. You will also undoubtedly realize how much this club can give you. In return for taking that first big step to join the club, braving the learning curve, and being willing to learn, I got to join a supportive community, create unforgettable memories, and make lasting friendships. On top of that, simply being on the team helped me develop skills like self-advocacy, public speaking, and teamwork as well as build technical expertise.

As you come to your first work-sessions, I highly encourage you to shadow our members. We're all so excited to introduce you to the wonderful world of FIRST Robotics and can't wait to meet you!



Basketball and Robotics, Continued...

our team works to assemble a robot to prepare for our competitions. Similarly, in basketball we work as a team to play defense and pass to score baskets in a flawless manner. In the last build season, managing the practice times for basketball and work session times for robotics was a challenge for me, as basketball

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practice was two hours long, and interfered with robotics worksession, typically hosted in the evening. Along with basketball and robotics, I also had homework and other obligations. By organizing my time correctly, I was able to complete homework, basketball practices and manage to make it to some robotic worksessions. Through this experience, I was

able to learn the skills of time management.

Robotics and Basketball are the two golden sparks in my life that have brought me immense amounts of happiness. Both of these activities surprise me in how they are both similar relative to the soft skills that they teach me. The more fascinating conclusion is how these soft skills direct me to the same particular goals



Tiffany Wan (soph.) at a basketball tournament in 2022 where she won MVP.

such as happiness and success in both activities.

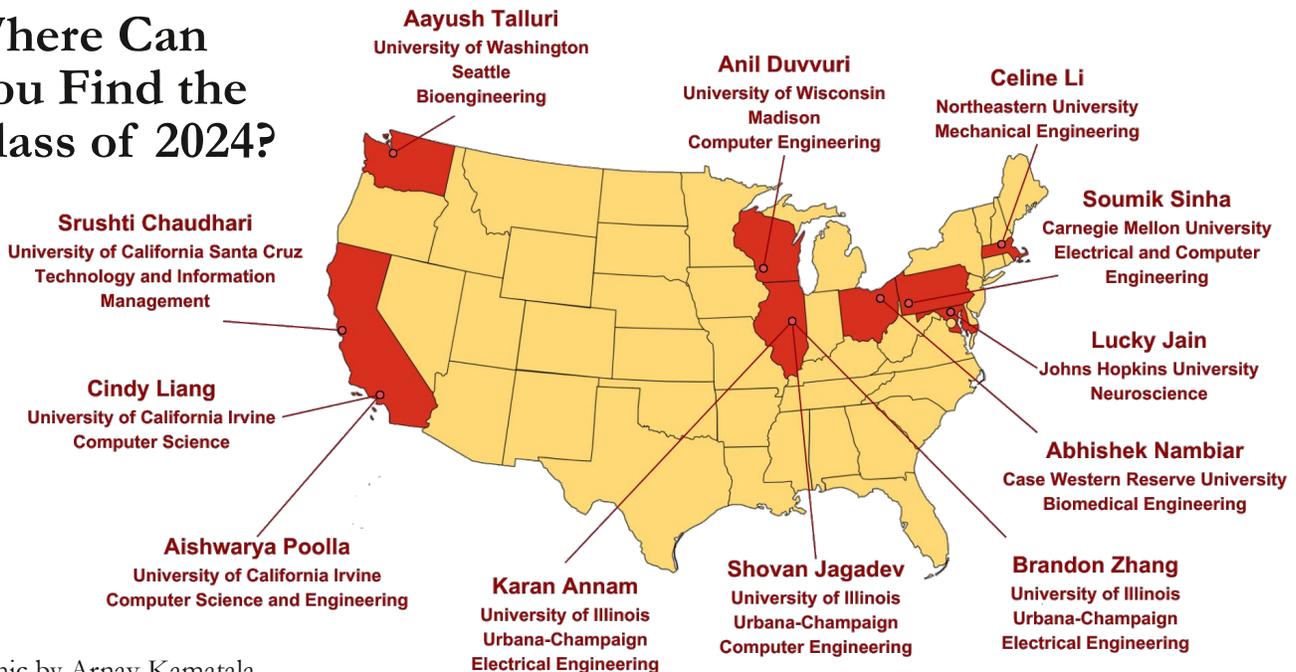
Robotics has definitely made a huge impact on my basketball journey helping me become a better player. Basketball players run on court while they play to score or prevent the other team from scoring just like the robots scrambling on the field to score. Basketball players practice hard before games or scrimmages like team members practice with their robots before their matches against other robots. It's definitely interesting to see basketball, my favorite sport, as an illustration made better because of robotics.



Tiffany Wan (soph.) going by her defender.



**Where Can
You Find the
Class of 2024?**



Graphic by Arnav Kamatala