



11th Annual FLYSET *FIRST* Workshop Program Book



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Schedule

<div>11th Annual FLYSET <i>FIRST</i> Workshop<div></div></div>		
8:00 AM	Check in starts for in person attendees (zoom opens)	
8:15-8:30	Unlock the fun! Win one of 18 Limited Edition Technibots Keychains and 3 of Goldman Sachs Wireless Phone Chargers in our Workshop Trivia warm-up!	
8:30 AM	Welcome and Guest Speeches	TI Auditorium (ECSS 2.102)
8:30-8:35	Welcome	Dr. Fang Wang, Founder and President of FLYSET.org
8:35-8:45	Workshop Opening Remarks	Eric Van Gemenen, Executive Chairman of <i>FIRST</i> in Texas Foundation Board
8:45-9:05	Keynote Speech: Charting your STEM Future	Abhishek Rai, Managing Director, Goldman Sachs Global Investment Research
9:05-9:30	Orchid Giving Circle <i>FIRST</i> Robotics Team Grant and Scholarship Award Ceremony	Scholarship and Team Grant Winners
9:30-9:55	Guest Speech: FTC new changes in 2025-2026 season	Dr. Patrick Michaud and Ms. Emily DeMille <i>FIRST</i> in Texas FTC program leaders
9:55-10:00	Drawing #1 (giftcard sponsored by Custom Ink, Toolbox sponsored by HomeDepot and FLYSET)	
10:00 AM	FIRST Tech Challenge Track	TI Auditorium (ECSS 2.102)
10:00-10:20	Understanding FTC Judging Strategy	18139 Rebel Robotics
10:20-10:40	My robot keeps breaking, what do I do?	7172 Technical Difficulties
10:40-11:00	Advanced Motion Control & Loop Time Optimization	24033 Alphatronic
11:00-11:05	Drawing #2 (giftcards sponsored by AndyMark)	
11:05-11:25	Efficient Cable Management	17861 CSH
11:25-11:45	Limelight 3A Sample Detection and Automated Grabbing	18270 Roboplayers
11:45-12:05	Inverse Kinematics and Pure Pursuit	14259 TurbQ V8
12:05-12:10	Drawing #3 (giftcards sponsored by Studica and Swift Robotics)	
9:40 AM	FIRST Lego League Challenge Track	ECSS 2.415
9:40-9:45	FLL Track Opening Remarks	Sara Brown, North Texas FLL Program Delivery Partner
9:45-10:00	Best for the last - my final season of FLL	FLLC2025S90 Reincarnated (China)
10:00-10:15	How to Prepare for FLL Competitions	25609 LOAD Robotics (Delaware)
10:15-10:30	Good Coding Practices for Spike World Blocks	60398 Digital Dominaters (Plano, Texas)
10:30-10:45	Organizational Tools for your Innovation Project and Robot Design	55696 Team Alpha Geek (Wisconsin)
10:45-10:50	Drawing #4 (Amazon giftcards sponsored by Bank of America and Global Jump Start orgnization)	
10:50-11:05	Robot Design	25110 SCRAPS (Greece)
11:05-11:20	FLL Challenge Innovation: Pufferfish the Safety Suit	65014 Pynauts (Plano, Texas)
11:20-11:35	Robot game mission strategy and methodology	64793 PARDOBOOTS (Brazil)
11:35-11:50	Team Development	70363 Robotech (Spain)
11:50-11:55	Drawing #5 (Amazon giftcards sponsored by Bank of America and Global Jump Start orgnization)	
Lunch Break - FTC Robot Demo, Lego Mindstorm Robot past generations display and FTC / FLL Marketplace (11:55-1:00, staggered) Lunch pizza and cake sponsored by Technibots Alumni and Ranch 99		
12:30 PM	FIRST Lego League Fun Acitvity and Competition	ECSS 2.415
12:30-1:00	Studio 2.0 mosaic building activity	Technibots 8565 hosts
1:00-1:15	Unearthed Mission Model Mini Build Competition Gallery showcase and Winner Announcement (Lego Gift Card \$100: sponsored by Bank of America)	
1:15-2:30	Six Simple Machines (hands on building activity)	James Brodnick, Judge Advisor of North Texas FLL Challenge
1:00 PM	FIRST Tech Challenge Guest Speech and Planery Session	TI Auditorium (ECSS 2.102)
1:00-1:25	Guest Speech: The future of <i>FIRST</i> in North Texas	Lon Cherryholmes, North Texas FTC Program Delivery Partner
1:25-1:50	Guest Speech: Swift Robotics New Product Line for FTC/FRC	Matthew Thomas, CEO of Swift Robotics
1:50-1:55	Swift Robotics Product Drawing (Swift Robotics Giftcards)	
2:00 PM	FIRST Tech Challenge Gold Track	TI Auditorium (ECSS 2.102)
2:00-2:15	Teamwork makes the design work: how strategy affects design from day one	23213 Open Source
2:15-2:30	Neural Network Based Path Following in FTC	8565 Technibots
2:30-2:45	AI + Homography	6165 Cuttlefish
2:45-2:50	Drawing #6 (drillsets sponsored by HomeDepot and FLYSET, Amazon giftcard sponsored by ACP)	
2:50 PM	FIRST Alumni Panel Discussion	TI Auditorium (ECSS 2.102)
2:50-4:00	FIRST Alumni Panel Discussion	FIRST Alumni from Multiple Teams
4:00-4:05	Alumni Drawing (Goldman Sachs, Swift Robotics, Symbotic, FerraComponents, LEGO set donation)	
2:00 PM	FIRST Tech Challenge Blue Track	ECSS 2.410
2:00-2:15	Vibe Roboting - Performing Well with Limited Time Commitment	6417 Blu Cru
2:15-2:30	Troubleshooting Turbulence in Teleop	23344 Technical Turbulance
2:30-2:45	Season Timeline and Team Planning	18763 Texpand
2:45-3:00	Basics of Robot Design and Our Process	11419 & Sister team 19897 Jasper Wolves Blue and White
3:00-3:05	Drawing #7 (Swift Robotics giftcard, Amazon giftcard sponsored by ACP)	
3:05-3:20	Packaging and Organizing Your Portfolio	5485 Gorillabots
3:20-3:35	Teamwork Through Outreach	6566 Circuit Breakers
3:35-3:50	Introduction to Robot Consistency	16236 Juice
3:50-4:20	Using the Studica Power Module to Simplify End Effector Wiring	22077 Marcus Minions
4:20-4:25	Drawing #8 (Amazon giftcards sponsored by ACP)	
2:00 PM	FIRST Tech Challenge White Track	ECSS 2.412
2:00-2:15	The Basics of Inverse Kinematics in Robotics	21229 Quality Control
2:15-2:30	Managing Your FTC Team with Notion	23350 Microchips and Queso
2:30-2:45	Custom Boxtube Extension in FTC	22105 Runtime Terror
2:45-3:00	Robustness: The Design Ethos that Ensures Competitive Longevity	25576 Voyager X
3:00-3:05	Drawing #9 (Swift Robotics giftcard, Amazon giftcard sponsored by ACP)	
3:05-3:20	Redemption, Growth, and Grit: Canadian Rockies Premier Event Experience	18227 Area 52
3:20-3:35	Beginners Guide to Prototyping	15083 Overclock
3:35-3:50	Swervolicious - Evolution of a Swerve Module Design	6832 Iron Reign
3:50-4:05	Obtaining Sponsorship	12993 Robokings
4:05-4:10	Drawing #10 (Amazon giftcard sponsored by ACP, Custom Ink giftcard)	

Morning Guest Speeches

Welcome



- Fang Wang
- Founder and President of *FLYSET.org*



Opening Remarks

- Eric van Gemenen
- Executive Chairman of *FIRST* in Texas Board



Keynote Speaker

- Abishek Rai
- Managing Director, Global Investment Research
- Goldman Sachs
- **Topic: Charting your STEM future**



Guest Speakers

Ms. Emily DeMille
Dr. Patrick Michaud
FTC Leaders, *FIRST* in Texas

Topic: FTC new changes in 2025-2026 season



Afternoon Guest Speeches

Guest Speaker



- Lon Cherryholmes
- North Texas Program
Delivery Partner of *FIRST* in Texas
- Topic: The future of *FIRST* in North Texas



Guest Speaker



- Matthew Thomas
- Ceo of *SWYFT* Robotics
- Topic: *SWYFT* Robotics New Product Line for FTC/FRC



Orchid Giving Circle Award Ceremony



This year, FLYSET partnered with Orchid Giving Circle to provide scholarships for Asian girls. This support empowers more Asian girls to explore STEM, participate in the *FIRST* Robotics program, and develop their skills in engineering.



Congratulations to our winners!

***FIRST* Robotics Scholarship for High School Graduates**

Teagan Gao, 12977 Rust in Peace

***FIRST* Robotics Scholarship for FTC**

Aurora Cai, 25950 Rusty Crabs
Claire Wang, 18227 Area 52
Danielle Hwang, 26300 Anomaly
Emma Fu, 25950 Rusty Crabs

***FIRST* Robotics Scholarship for FLL Challenge**

Amelia Chou, 65104 Pynauts
Annie He, 60398 Digital Dominators
Levana Wei, 65217 AI Techbots
Zoe Madera, 69778 CDA Lion Cubs

FTC Team Grant

Jasper Wolves Blue, 11419
Rust in Peace, 12977
SHARK!, 21235

***FIRST* Robotics Education Scholarship**

Annie Shao , 4th	Olivia Ren , 3rd
Cynthia Hu , 9th	Vivian Wu , 4th
Kelsey Curry , 4th	

Watch here:



Scan here to learn more:



FTC Robot Demos

During lunch time, various FTC teams broke out their past season's robots! Teams 8565 Technicbots, 23344 Technical Turbulence, and 15083 Overclock put on a demonstration for the attendees.

technicbots 8565



Robots from Into the Deep and Ultimate Goal seasons



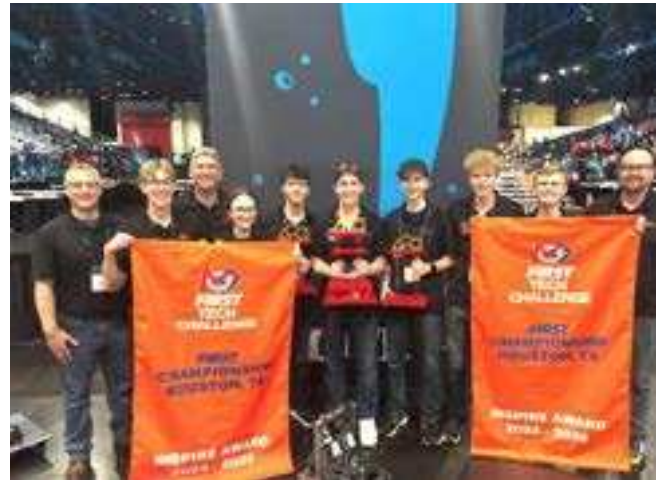
FTC Morning Track



18139 Rebel Robotics

Nebraska, USA

FTC Judging Strategy



Rebel Robotics, a team of six from small-town Nebraska, focuses on growing STEM and sharing their knowledge with the world. Last season, they won the 1st place Inspire Award at the World Championship in Houston, and will be representing Team United States of America for the upcoming FIRST Global Challenge in Panama City, Panama. Currently, they are focusing their efforts on outreach, preparations for FIRST Global, and finding sponsors to help get them to Panama.

7172 Technical Difficulties

Plano, Texas

My robot keeps breaking, what do I do?



This is team 7172, Technical Difficulties. They are a 12-year community team based in Plano, Texas. They were the 2025 Franklin Division Connect Award Winner, and Franklin Division Semi Finalist Team.



24033 Alpatronic

Cluj-Napoca, Romania

Advanced Motion Control &
Loop Time Optimization



24033 Alpatronic is an ambitious group of students from Transylvania College, Cluj-Napoca with a powerful passion for robotics. They joined forces in order to shape their vision into reality, to fight for a better future and to support innovation. To be as efficient as possible, they have divided their team into 4 different departments: PR and marketing, engineering, programming plus business and financial.



17861 CSH

Timisoara, Romania

Efficient Cable
Management

Team 17861 CSH has been competing in the FIRST Tech Challenge for 6 seasons, and a total of 23 official events since 2019. They were the 2025 Franklin Division Winning Alliance Captain as well as 2nd place Control Award. They are ranked 21st globally with a 222.99 OPR.



18270 Roboplayers

Dallas, Texas

Limelight 3A Sample
Detection and Automated
Grabbing



18270 RoboPlayers is an 8 member team from Dallas, Texas. They have been competing for the last 5 years and have advanced to the World Championships 3 times. Last season, they were the Winning Alliance Captain of the Jemison Division at Worlds and the Inspire Award first place in North Texas.



14259 TurbΩ V8

Pleasanton, California

Inverse Kinematics
and Pure Pursuit

14259 TurbΩ V8 is a community team based in Pleasanton, California. Since their start in 2018, they have grown to a team of 13 passionate high school students driven by innovation and collaboration, and are the second generation of 14259. They have been proud to earn Think & Innovate awards at previous events, and win the Maryland Tech Invitational. This year, they advanced to the FIRST International Competition where they placed 3rd in our division and won the control award.





FIRST Lego League Challenge Track



FLLC2025S90 Reincarnated

Hong Kong, China

Best for the last - My Final
Season of FLL



From the Chinese International School in Hong Kong, Reincarnated embarked on their journey this year with just two experienced members leading eight new members, and without any coaches. They are proud to share that they achieved the Champion's Award at the ACAMIS interschool Regional and National Championships. Additionally, they received the Robot Performance Award and were recognized as an Innovation Finalist at the Hong Kong Open Championship, achieving the only full point among over 80 competing teams.



25609 LOAD Robotics

Delaware, USA

Competition
Preparation

25609 LOAD Robotics has competed at the World Championship four times. In 2024, they won the Engineering Excellence Award, and in 2025, they were Core Values Finalists. They are a community team based in Delaware, and have now graduated to an FTC team that attended the World Championship last year. They'd like to share some tips for preparing for your competition that they have developed during their seven years of participation in FLL.



60398 Digital Dominators

Dallas, Texas

Good Coding Practices for Spike World Blocks



This is 60398 Digital Dominator's third season in the FLL Challenge level. Today, they will present how to adopt good coding practices in a block-coding environment. Fun fact—they're currently on a mission to find dinner options beyond pizza, so feel free to share your suggestions after the session!

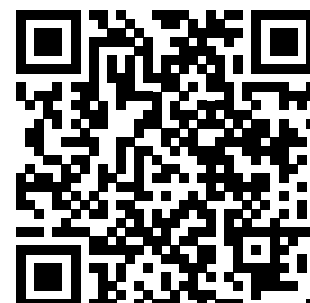


55696 Team Alpha Geek

Wisconsin, USA

Organizational Tools

55696 Team Alpha Geek is an FLL Challenge team from Brookfield, Wisconsin. They are a group of ten kids, grades 4th through 8th and they have competed at Worlds the last two years after winning Champions Awards at their State Competitions. Today they will share ways that they stay organized in innovation project and robot design.



25110 SCRAPs

Thessaloniki, Greece

Robot Design



Team 25110 SCRAPs is a distinguished robotics team from Thessaloniki, Greece, proudly competing 7 years in the FIRST LEGO League Challenge. They are a collection of talented individuals with exceptional skills in robotics, mathematics, chemistry, and physics, united by their passion for exploration, research, and the spirit of gracious professionalism. They operate through a sophisticated 5-department structure that maximizes their potential: Programming Department, CAD Department, Social Media & Outreach Department, Fundraising Department, and Robot R&D Department.



65104 Pynauts

Dallas, Texas

FLL-C Innovation:
Pufferfish the Safety
Suit

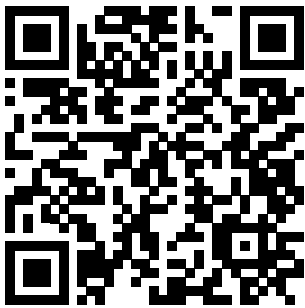
Team 65104 Pynauts received the 1st Place Champion's Award at the Texas State Championship last season. Representing Texas at the FIRST World Championship, they brought home two awards on the global stage. In this talk, the team will present their award-winning innovation project, the Pufferfish Safety Suit, an innovative solution that addresses a critical aspect of diving safety. They will also share highlights from their exciting experience at the World Championship.



64793 PARDOBOOTS

São Paulo, Brazil

Robot Game Mission Strategy and Methodology



This is the Pardoboots team from Santa Cruz do Rio Pardo, São Paulo, Brazil! They have participated in the FIRST Championship in Houston, during the Masterpiece season, where they won 2nd place in the Champions Award. In the Submerged season, they achieved 3rd place in the Champions Award and 2nd place in the Regional Robot Game, and also qualified for the national stage, where they won 6nd place in the robot game! This is their second participation in FLYSET, and today they will share their knowledge about mission strategy!



70363 Robotech

Dallas, Texas

Team Development

Robotech is a team that, in just three years, went from starting from scratch to becoming one of the most awarded teams at Houston World Championship, all without a coach or supporting institution driven by motivation, enthusiasm, and the power of teamwork. Today they will be presenting about their development and experience.



FLL Track Fun Activities



Studio 2.0 mosaic building

FLL track hosts Grace and Aurora taught the kids how to turn a regular image into a mosaic using studio 2.0!

Unearthed Mission Model Mini Build Competition

Competitors showed off their mini-recreations of the 2025 FLL season mission models in Unearthed. Congratulations 65104 Pynauts on the Silo design!

\$100 LEGO gift card prize sponsored by: Bank of America



Six Simple Machines

James Brodnick, Judge Advisor of North Texas FLL Challenge, led attendees through a hands-on building activity. They used technic LEGO parts to create different "machines" representing six basic movements.





FIRST Tech
Challenge
Blue Track



6417 Blu Cru

Rockville, Maryland

Vibe Roboting: Performing Well with Limited Time Commitment



Blu Cru is a 12th-year FTC team from Rockville, Maryland. They were the finalists at the Chesapeake Championship and were the 8th Captain in the Edison Division. They were also the Innovate 3rd Place Award winners at Worlds. This season, they competed at MTI and placed 13th.

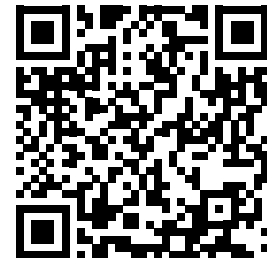


23344 Technical Turbulence

Plano, Texas

Troubleshooting
Turbulence in Teleop

Technical Turbulence is a top-ranked FTC team from Plano, Texas, entering its third season. Known for innovative design and strong software, they aim to improve hardware, expand programming, and grow community outreach.



18763 Texpand

Capetown, South Africa

Season Timeline and Team Planning



Team Texpand 18763 is an FTC community team based in Cape Town, South Africa. Established in 2020, the team has eight members and has qualified for the World Championship three times, earning Winning Alliance Captain in South Africa each year since its founding.



11419/19897 Jasper Wolves Blue and White

Plano, Texas

Basics of Robot Design and Our Process



Jasper Wolves Blue and Jasper Wolves White, two veteran teams from Jasper High School, have competed for five seasons, earning numerous awards in design and outreach. Jasper Wolves Blue claimed the Texas UIL State Championship in the Center Stage season and served as finalist alliance captain in the Sapphire Division of last year's North Texas Regional Championship.



5485 Gorillabots

Corning New York

Packaging and Organizing
Your Portfolio



5485 GorillaBots is a community-based FTC team now in their 14th season. Backed by sponsor Corning Inc., they're known for steady performance and impactful outreach. They were on the winning alliance and earned Inspire 2nd at their regional championship. At the World Championship, they ranked 14th overall and claimed the #1 Alliance Captain spot in the Ochoa Division.



6566 Circuit Breakers

Aledo, Texas

Teamwork Through
Outreach

Since 2012, Circuit Breakers has been building top-tier robots and living out FIRST values. They've reached area, regional, state, and world competitions multiple times, and recent wins include Regional Inspire (2020), 2nd Inspire and Think (2025), plus the Design Award at the Run for the Robotics Premier event.



16236 Juice

Folsom, California

Introduction to Robot Consistency



Team 16236, Juice, is a student-led FTC team from Folsom, California. Founded in 2019, it has grown to 15 members in grades 8–12, organized into outreach, hardware, and software subteams. Juice is dedicated to and united by the shared mission of promoting STEM in the local community.



22077 Marcus Minions

Flower Mound, Texas

Using the Studica Power Module to Simplify End Effector Wiring

22077 Marcus Minions is a high school based team from Flower Mound, TX. 22077 has been competing for 3 years since 2022. Last season, they had a very impressive run, managing to advance to worlds, competing at the Texas UIL state championship, and the FIRST in Texas Cowtown Invitational.





FIRST Tech Challenge White Track



21229 Quality Control

Bellevue, Washington

The Basics of Inverse Kinematics in Robotics



Team 21229 Quality Control is a community-based team in Washington state. They were part of the 2023 Worlds Winning Alliance, and have won two Innovate awards at Worlds. In this past season they were Alliance Captain at their State Championship and Franklin Division Finalist at Worlds.



23350 Microchips and Queso

San Antonio, Texas

Managing Your FTC Team with Notion

Team 23350 Microchips and Queso is based in San Antonio. They won Design Award 1st place and Finalist Alliance Captain at the 2023 Texas State Championships, and Design Award 3rd place at the 2023 World Championships. At the 2024 Central Area Championships, they won Inspire Award 3rd place, were their Division Winning Alliance, and was the Finalist Alliance 1st pick. They also hosted the Queso Bowl.



22105 Runtime Terror

San Diego, California

Custom Boxtube Extension in
FTC



Team 22105 Runtime Terror is a community team based in San Diego, California. At the Michiana Premier Event, they were the Inspire Award 3rd place winners and finalist alliance first pick of their division. They also won the Think Award 2nd place at the San Diego Championship.



25576 Voyager X

Plano, Texas

Robustness: The Design
Ethos that Ensures
Competitive Longevity



Team 25576, VoyagerX, is a second year team out of North Texas. In their rookie season, they ranked as high as the #2 rookie teams in Texas by OPR and reached the regional semifinal where they received Control second place.



18227 Area 52

Plano, Texas

Redemption, Growth, and
Grit: Canadian Rockies
Premier Event Experience



Team 18227 Area 52 is a community team based in Plano, Texas. At the Canadian Rockies Premier Event, they were the Think Award winners and the Finalist Alliance Captain. They won the Connect Award at the Texas North Regional Championships as well.



15083 Overclock

Allen, Texas

Beginner's Guide to
Prototyping

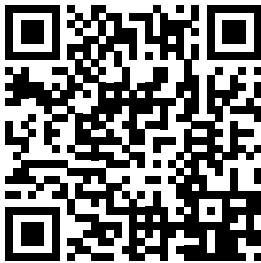
From Allen, TX, FTC Team 15083 – Overclock thrives on precision and innovation—achievements include the Control Award at Kentucky's Run for the Robots premier event, Design, Think, and Control Awards throughout their season in Texas's Tournaments, and a Finalist Alliance run at the Texas UIL FTC State Championship.



6832 Iron Reign

Dallas, Texas

Swervolicious - Evolution of a Swerve Module Design



Iron Reign has been a robotics team since 2012. Their main goals consist of pushing the limits of high school robotics and breaking out of the box with innovations and designs, while improving STEAM accessibility in their community. Reign's presentation today will tell the story of the evolution of their Swervolicious Tri-Swerve, which has been in the works for almost two years now.

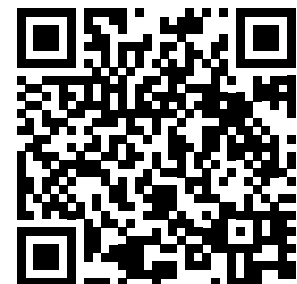


12993 Robokings Aurum

Queensland, Australia

Obtaining Sponsorship

Team 12993 Robokings Aurum is an FTC team based in Queensland, Australia. They were the Connect Award 3rd place winners in the Edison Division at the World Championships, and at the Australian Championships, they won Inspire Award 2nd place and were the Finalist Alliance Captain.





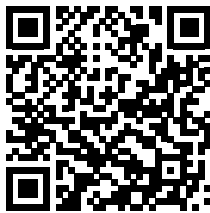
FIRST Tech
Challenge
Gold Track



23213 Open Source

Willis, Texas

Teamwork makes the design work: how strategy affects design from day one



Open Source was formed when three best friends from Willis, TX, organized for the win with killer code and neon robots. They work hard, help others, and always make a big splash at competitions.



8565 Technibots

Plano, Texas

Neural Network Based Path Following in FTC



FTC Team 8565 Technibots was the 2022 FIRST Tech Challenge World Champion, 2023 FIRST In Texas FTC State Champion, and 2024 World Championship Edison Division Inspire Award Winner. Since its founding in 2009, it has spread the excitement of science, technology, and engineering in North Texas and beyond, from FIRST programs to community robot showcases.



6165 Cuttlefish

Saratoga, California

AI + Homography



6165 MSET Cuttlefish is a competitive FIRST Tech Challenge (FTC) robotics team based in Saratoga, California that has qualified for the World Championships in Houston four times. The team is known for its innovative engineering, strong teamwork, and commitment to STEM outreach. Each season, they design, build, and program a robot to compete in FTC challenges, emphasizing problem-solving and collaboration. This past season, the team built a fully customized robot and qualified for the Maryland Tech Invitational and Worlds as the Finalist Alliance Captain.

Alumni Panel

Melody Hu

- UC Berkely
- EECS and Business



Max Fan

- Northeastern University
- Data Science and Math



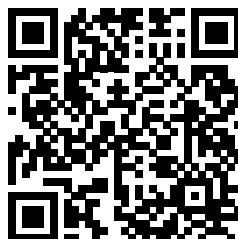
Austin Liu

- Brown University
- Computer Science



Patrick Li

- Purdue
- Computer Engineering



Anthony Wang

- UT Austin
- Computer Science Turing



Thank you for
attending the 11th
Annual FLYSET FIRST
Workshop!

