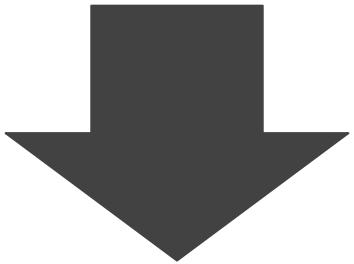
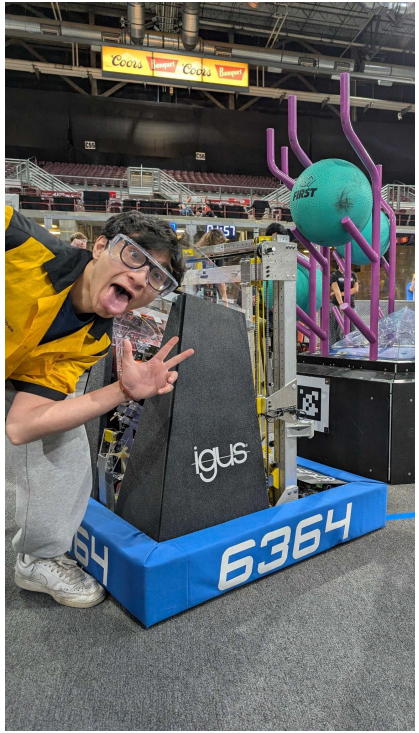
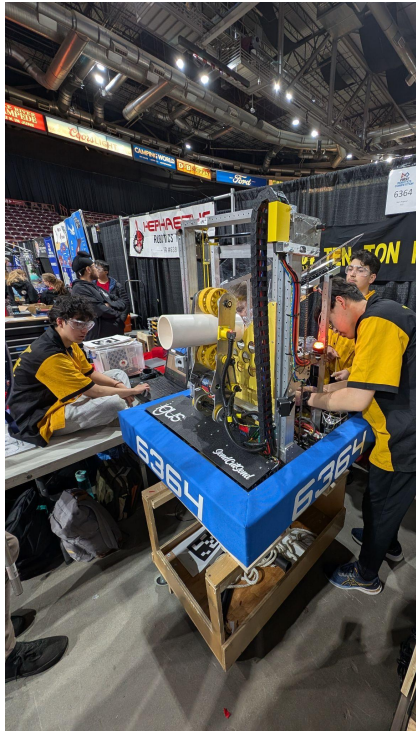
HI I’m Jadyn

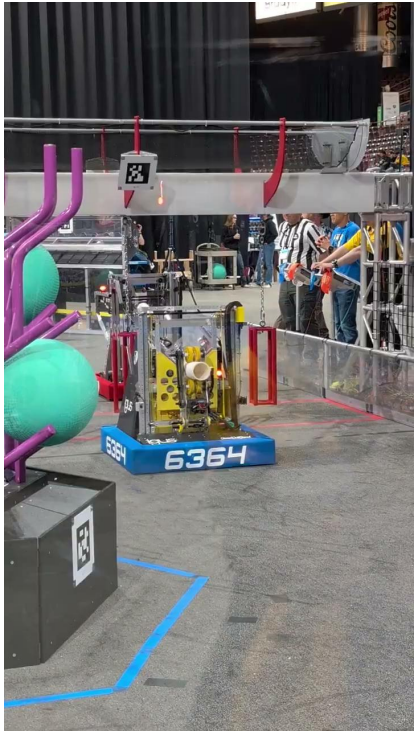
I build awesome robots

Scroll down if you’re interested









Please click on the video to view it

FRC Robot 2024/2025

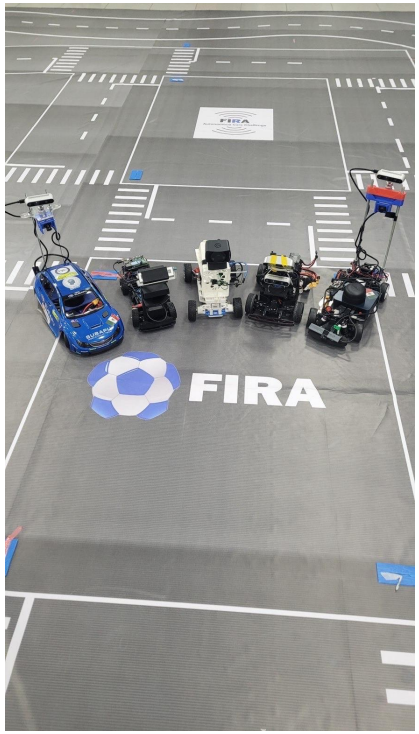
This robot was built in 2025 for the first robotics competition. I led development of the entire robot.

Autonomous Routine

This is a video of the robot's autonomous routine. Full field Localization was done with April tag based Solve-PNP fused with wheel encoder data via a kalman filter. Movement was done by PID based path following. The paths were generated with bezier curves.

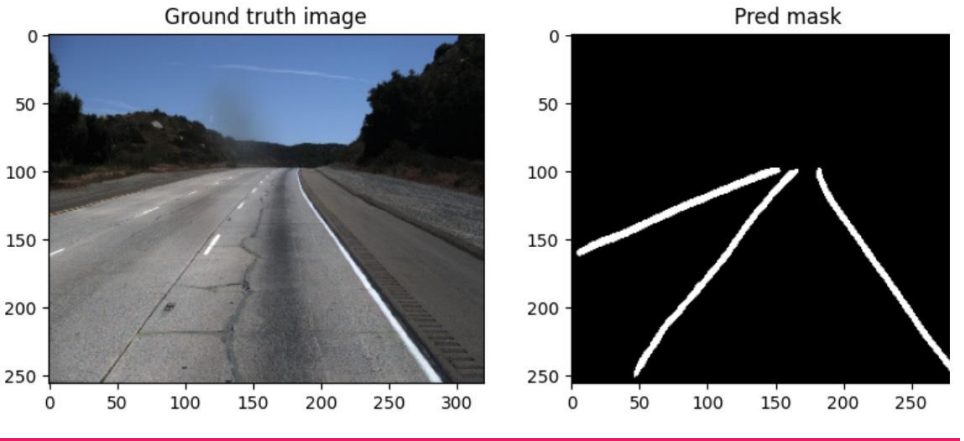
FIRA Self Driving Car 2024

This robot was built in 2024 for the fira robocup, initially in 3 weeks but 2 months for the robot we took to brazil that won **2nd place globally**.



World Championship Car

These are photos of the car developed for the world championship and eventually won 2nd.

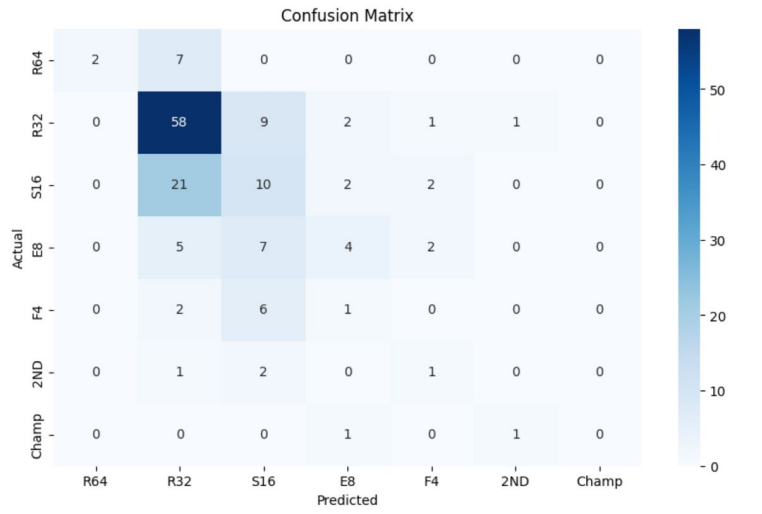


Mobile CNN Based Lane Detection

A clear, intuitive visualization of the CNN I developed for our self-driving car's road perception system. The left image shows the raw road camera input, and the right image shows the model's predicted lane segmentation mask (white = lane markings, black = background). The network uses a classic CNN encoder-decoder layout, with MobileNetV2 (B2 stage) providing lightweight feature extraction and a small segmentation head that upsamples those features to produce the final lane mask efficiently for real-time use on a Raspberry Pi 4B.

Classification Report:

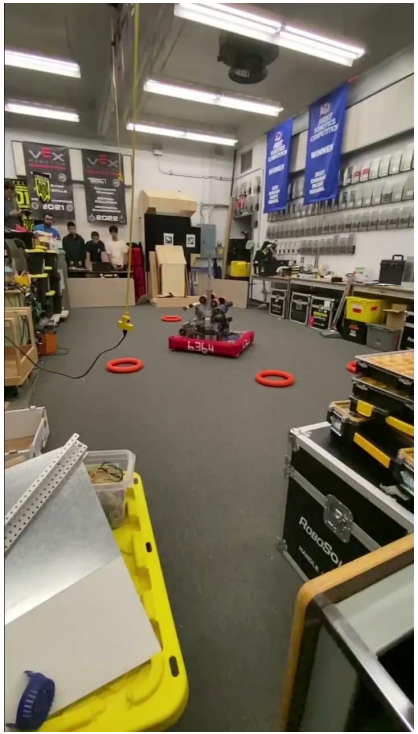
	precision	recall	f1-score	support
R64	1.00	0.22	0.36	9
R32	0.62	0.82	0.70	71
S16	0.29	0.29	0.29	35
E8	0.40	0.22	0.29	18
F4	0.00	0.00	0.00	9
2ND	0.00	0.00	0.00	4
Champ	0.00	0.00	0.00	2
accuracy			0.50	148
macro avg	0.33	0.22	0.23	148
weighted avg	0.48	0.50	0.46	148



March Madness Predictor

A visualization of my March Madness prediction model, showing evaluation results for an ordinal neural network** that predicts ordered tournament outcomes (R64 → Champion) from engineered efficiency metrics. The model learns **round progression probabilities** rather than discrete classes by predicting cumulative thresholds (P(Y>=r)), so performance is measured in ordinal distance instead of accuracy alone.

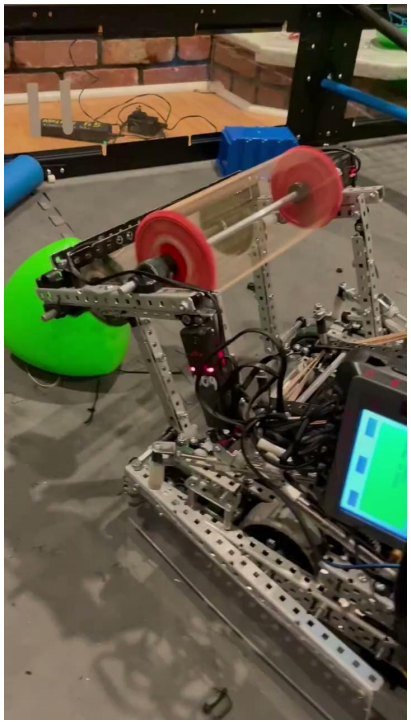
The model had A Mean Absolute Error of 0.72 which means the predicted finish is typically **within one tournament round** of the true result, indicating the model captures relative team strength and advancement likelihood while remaining limited by tournament randomness and class imbalance at deeper rounds.



FRC Robot 2023/2024

This robot was built in 2024 for the vex robotics competition. I played a supporting role in the development of this robot, that being said I still made major contributions.

Please click on the videos to view them



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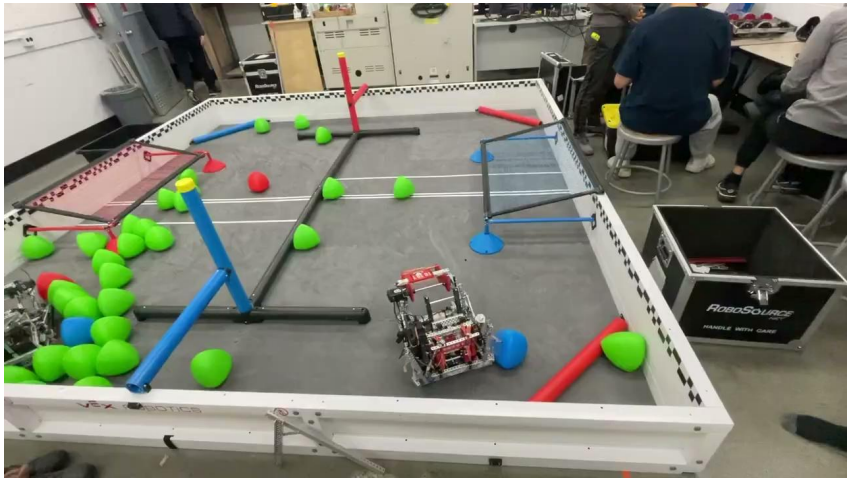
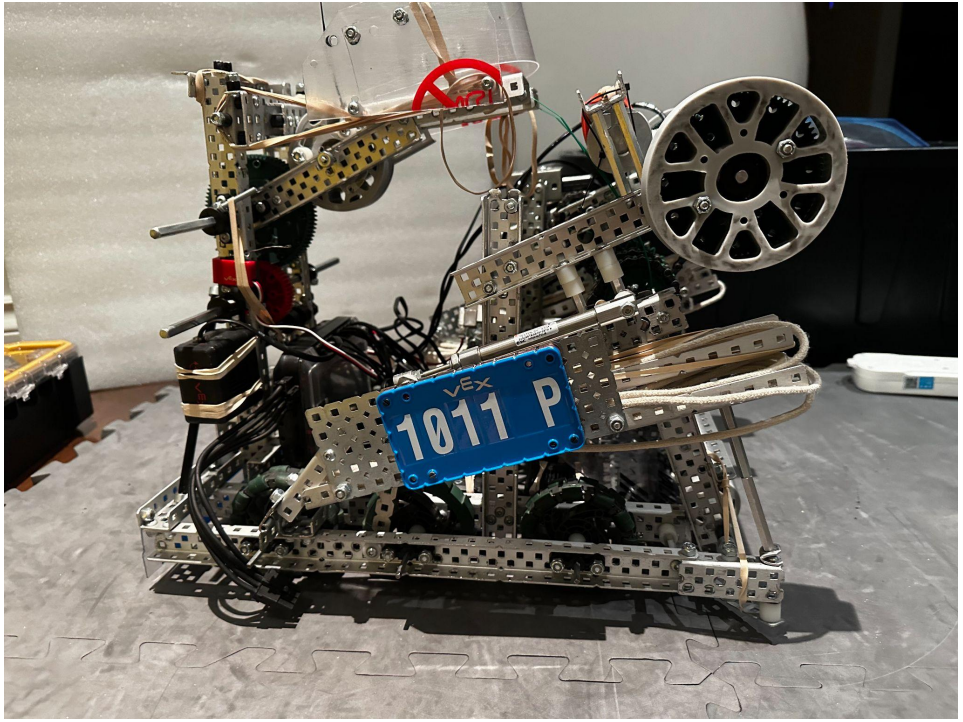


Vex Robotics 2022

This is a robot I designed and programmed myself for the vex robotics competition.

The robot had its own specialized wheel encoder based localization system and was able to autonomously navigate a given field smoothly using



Vex Robotics 2021

This is a robot I designed and programmed myself for the vex robotics competition.