

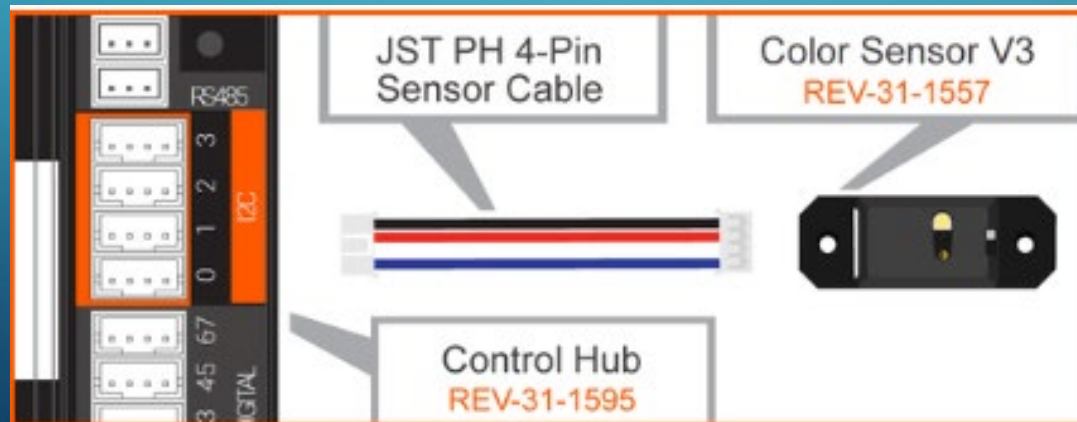


COLOR SENSORS

GEAR MASTERS – AIMEE LINEBARGER, CONNOR VAN NOTE

COLOR SENSOR RESOURCES

- REV Color Sensor v3 Resources – <https://www.revrobotics.com/rev-31-1557/>
- Using a Color Sensor Part 1 - <https://youtu.be/iQufRF1HFRc>
- Using a Color Sensor Part 2 - https://youtu.be/uSEEO3_JVTI



COLOR SENSOR USES IN POWERPLAY

- Detect Custom Signal Sleeves
- Detect lines in autonomous to drive to cone stacks

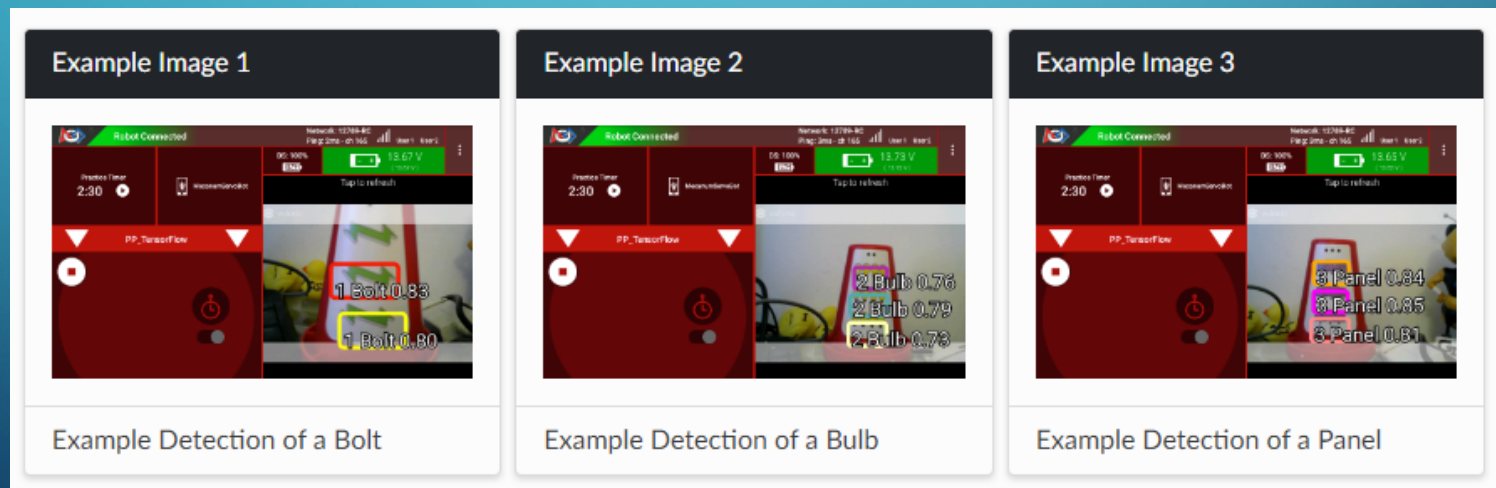
A decorative graphic on the left side of the slide, consisting of a network of white lines and circles on a blue gradient background, resembling a circuit board or neural network structure.

TENSORFLOW

GEAR MASTERS

TENSORFLOW OBJECT DETECTION

- TensorFlow for POWERPLAY overview - http://ftc-docs.firstinspires.org/programming_resources/vision/tensorflow_pp_2022/tensorflow_pp_2022.html



TENSORFLOW SAMPLE OP MODES

- [FTC Blocks Sample Op Mode for TensorFlow Object Detection](#)
- [Java Sample Op Mode for TFOD](#)

TENSORFLOW DOCUMENTATION

Search docs

- About the *FIRST* Tech Challenge
- Gracious Professionalism®
- Site Feedback Form

GETTING STARTED

- Rookie Teams
- Veteran Teams
- Coach (Administrative) Resources
- Technical Mentor Resources

GAME AND SEASON-SPECIFIC RESOURCES

- Game Manuals
- Game Q&A Forum
- Playing Field Resources

SOFTWARE DEVELOPMENT KIT (SDK)

- SDK Overview
- Updating Components

CONTROL SYSTEM RESOURCES

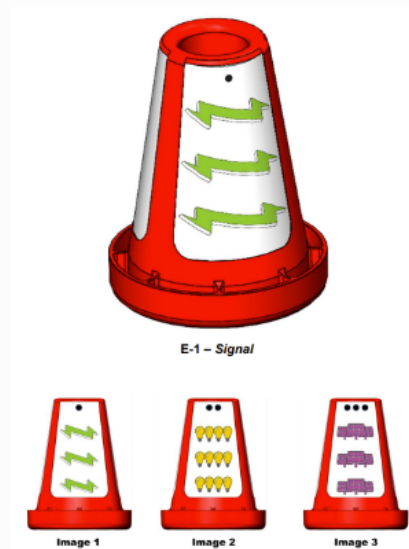
- Control System Introduction
- Hardware Component Overview

FTC Docs v: 0.1.0

TensorFlow for POWERPLAY presented by Raytheon Technologies

What is TensorFlow?

FIRST Tech Challenge teams can use [TensorFlow Lite](#), a lightweight version of Google's [TensorFlow](#) machine learning technology that is designed to run on mobile devices such as an Android smartphone. A *trained TensorFlow model* was developed to recognize the three game-defined images on the Signal element used in the **2022-2023 POWERPLAY** presented by Raytheon Technologies challenge.



A decorative graphic on the left side of the page, consisting of a network of white lines and circles on a blue gradient background. The lines are vertical and horizontal, with some diagonal segments, and the circles are of varying sizes, resembling a circuit board or a data network.

VUFORIA

GEAR MASTERS

IDENTIFYING NAVIGATION IMAGES (VUFORIA VUMARKS)

- http://ftc-docs.firstinspires.org/programming_resources/vision/identifying_vumarks/identifying-vumarks.html

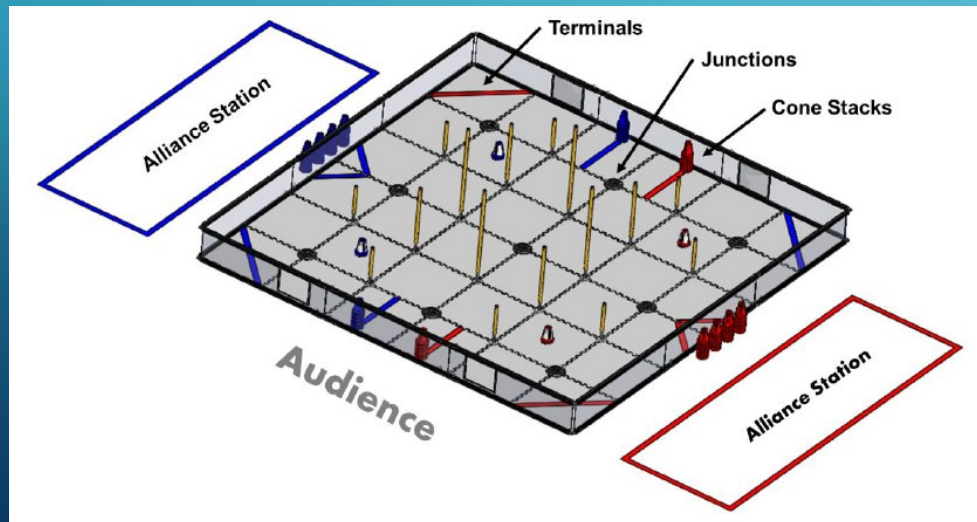


Image B6
Blue Alliance Rear Wall

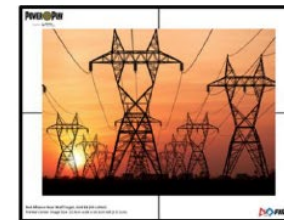


Image E6
Red Alliance Rear Wall



Image B1
Blue Alliance
Audience Wall



Image E1
Red Alliance
Audience Wall