WEEK 11 MEETING MINUTES

4/14/25

During this meeting, we discussed our plans for the week:

- Jason: Finish the second part of the wooden testbed
  - On Tuesday, we ran into the limitation of the saw's motor overheating
  - Make the stands for the Raspberry Pi Camera, find the new high-fps digital camera
- JJ: Fix the script on the Pi so that the RGB camera is working, compare it's quality to the new external camera
  - Collect some videos using pi script, if possible
- Anye: Update and retrain the YOLO model using tennis ball videos
  - Test the models with the high-speed RGB videos
- Logan: Investigate the CV2 or OpenCV to segment objects in image
  - Test the segmenting algorithm on thermal images

4/16/25

- Looked at some image color correction possibilities
- Bought and got the adapter for the Raspberry Pi to hook up to normal HDMI, demoed the current scripts
- Discussed about saw breaking
- Captured some more test data

4/18/25

- Met with client (Dr. Wang) in substitute of next week
- Discussed what each member accomplished so far this week
  - Showed the new, working script on the Raspberry Pi. Observed how the data is stored, looking at the raw data and methods to train models with it
  - Discussed challenges with client regarding saw breaking. Observed the pi camera
  - Tested the high framerate camera (Anye received Tuesday). Discussed potential limitations with the camera (video writer methods), and potentially how to fix it
    - JJ will work with Anye next week to fix these issues
  - Showcased methods of image color correction to client, showing how it could substantially improve the model's accuracy
- Discussed what we will accomplish next week- We will essentially all continue to work on our current tasks