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DETAIL REPORT Week 2 (22nd Jan – 26th Jan 2023)

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| **Objective(s) of activities:** YOLOv8 with realsense camera intergration : This week sum up is I can implement Yolov8 with realsense and make it run more smootly. | |
| **Contents:** | **Hour(s)** |
| 1. **Realsense D455**    * D455 is a high-tech depth camera for robots, 3D scanning, and more. Boasts longer range (12m!), wider view, and improved accuracy compared to its predecessors. Think precise obstacle detection, accurate scans, and cool AR/VR experiences. Open-source software makes it easy to use. Overall, a powerful all-rounder for depth data needs. 2. **Benefits of YOLOv8**    * super-precise depth camera, sees further (12m!), wider view (no more squinting!), works for robots, scanning, AR/VR. Easy to use with open-source software. Basically, depth data on steroids. 3. **Implement Realsense with YOLOv8**  * First, I install the realsense SDK to my computer. * Second, I use import pyrealsense2 as rs to use it when I detect the balls. * Finally, I can detect the ball using Realsense D455.  1. **Problems**   The dataset is a mess and the accuracy isn’t good enough.  The realsense camera having some issue when I connect it to my computer.  The Yolo model that I use is too slow to catch the frame from the realsense.   1. **Solutions**   By asking from Mr, Koratt, he advised me to use roboflow to trian the dataset instead of using ULTRALYTICS. Because the roboflow is more advanced than it.  I will try to train another model to make it more smoother. | **1 Week** |