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DETAIL REPORT Week 1 (14th Jan – 19th Jan 2023)

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| **Objective(s) of activities:** Introduction to YOLOv8 (You only look once) on Python version 3.8. During these week, my task is to did some literature review on how I can implement YOLOv8 with ubuntu 20.04 and I also complete some model training with ultralytics as well. | |
| **Contents:** | **Hour(s)** |
| 1. **What is YOLOv8 ?**    * YOLOv8 is a computer vision model that can perform various task such as Object detection, Image classification and segmentation. 2. **Benefits of YOLOv8**    * Reliable : Fewer error when spotting object.    * Efficient : The training process is really fast and also run well on the weak devices.    * Flexible : It can tell the different between object and can even pinpoint the specific parts. 3. **Training YOLOv8 with Ultralytics**   Ultralytics HUB is where I train all the dateset, that I got from the internet.   * First, I clone the dataset from roboflow where they publish the Ball dataset. * Secondly, I train the model by choosing YOLOv8x (this model is the most accurate one for me) * Thirdly, I can export those yolo dataset and can demo it.  1. **Problems**   I tried to implement YOLOv8 with Realsense D455 (camera) but it didn’t work since it need to much to config on my mac.  I did tried to config the realsense SDK with my mac but it still incomplete.  I also tried to implement YOLOv8 with ROS2 but it was failed due to some dictionary error and it lead my computer to error.   1. **Solutions**   I will switch to ubuntu 20.04 to make my computer compatible with realsense SDK, ROS2 foxy. | **1 Week** |