Data collection pipeline (30minutes to 3days manual, most expensive process)

1. Run data collection App and activate recording by F1 button to save video stream of rawroi frames
2. For each person, each hand, each pose manually handpicks 25 frames (base on maxima diversity) to form dataset
3. Load all the images in the dataset into makesense.ai with label of interest, lefthand\_thumb, righthand\_thumb, lefthand\_index, righthand\_index, lefthand\_four, righthand\_four, twothumbs. 7 classes
4. Load the dataset into coco\_merger.ipynb to merge json annotation with other dataset’s json annotation
5. Save dataset into artifacts storage disk

Training pre-process pipeline (10minutes manual 30minutes wait)

1. Paste prepared dataset folder into a folder located at the directory: C:\Users\ASUS\Desktop\coco\mmdetection\data
2. Organize data files into 3 folders as per belowA screenshot of a computer

   Description automatically generated

A close-up of a number

Description automatically generated

A screenshot of a computer screen

Description automatically generated

A screenshot of a computer screen

Description automatically generated

1. Modify config files at
   1. C:\Users\ASUS\Desktop\coco\mmdetection\configs\custom (Main)
   2. C:\Users\ASUS\Desktop\coco\mmdetection\configs\\_base\_\datasets\coco\_detection.py
   3. C:\Users\ASUS\Desktop\coco\mmdetection\configs\\_base\_ (Models)
   4. C:\Users\ASUS\Desktop\coco\mmdetection\configs\\_base\_\schedules (Scheduler)
2. Activate myenv conda environment, run jupyter notebook and open MMDet\_Trainer.ipynb to train model.

Training Post-Process Pipeline (10minutes manual)

1. Go to C:\Users\ASUS\Desktop\coco\mmdetection\work\_dirs directory to collect checkpoint .pth file and config file, paste it in C:\Users\ASUS\Desktop\PoseMM\_Models
2. Open inference deployment python project, open metadata.py, add new key to self.det\_inferencer object, where new key is the new trained model name, link checkpoint and config file to the dict object.
3. Run inference app and the model is ready for serving.