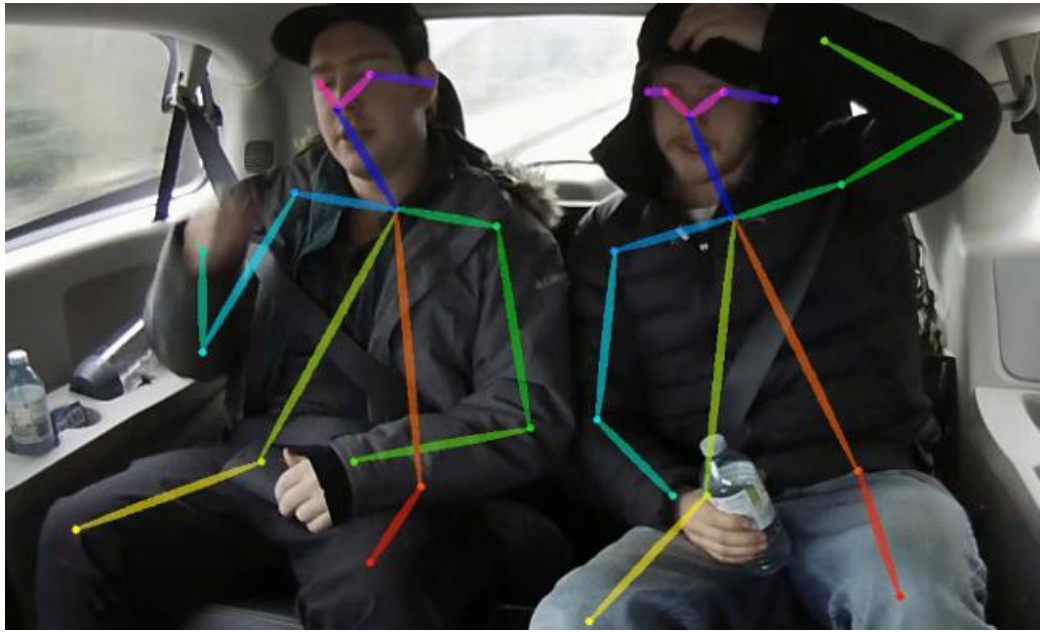
HumanPose

AI human posture detection, such as human skeleton detection, fall detection, people counting, etc. It can detect the position of human eyes, ears, nose, neck, shoulders, elbows, wrists, hips, knees, ankles.

Version 20230223

Applications

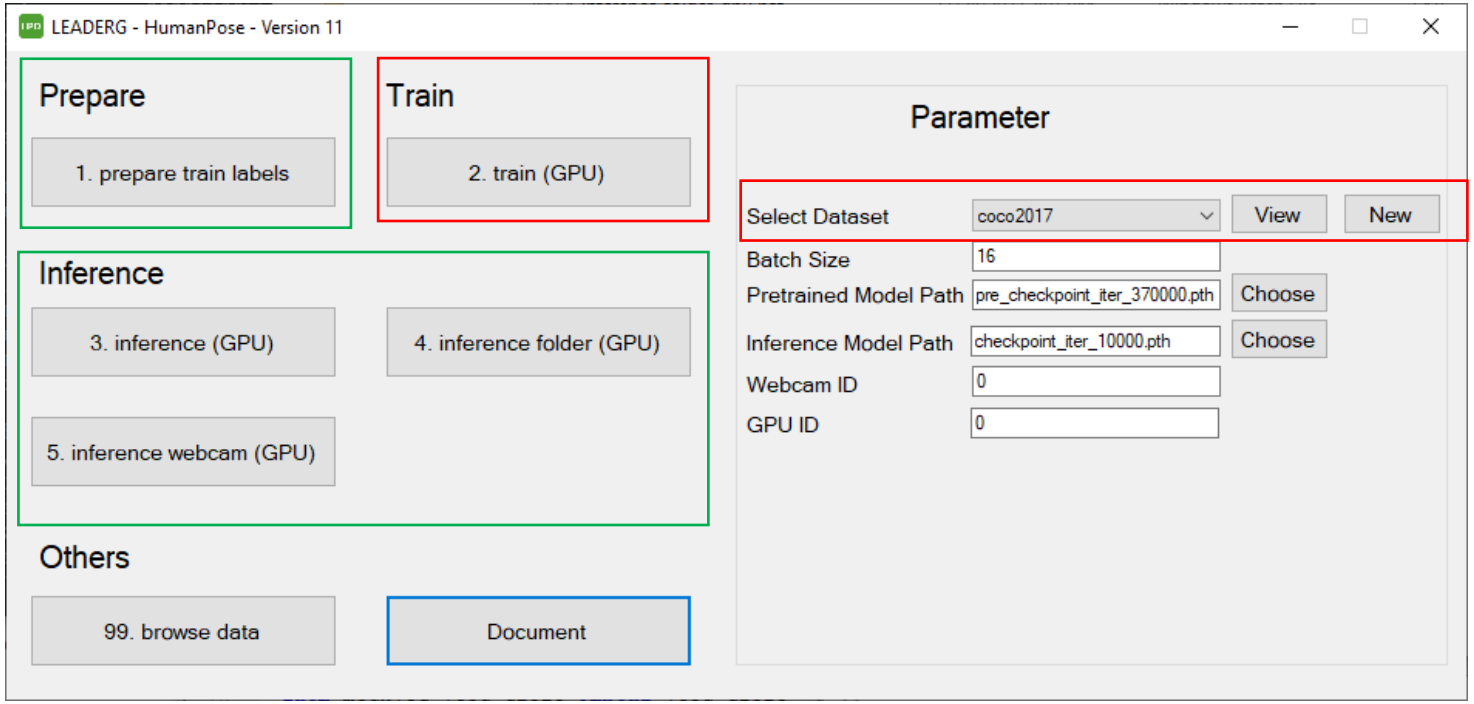
- HumanPose algorithms can be applied to medical image analysis, biological image analysis, advanced driver assistance systems, autonomous vehicle analysis, factory security systems, rehabilitation systems, etc.



How to use

The main process is:

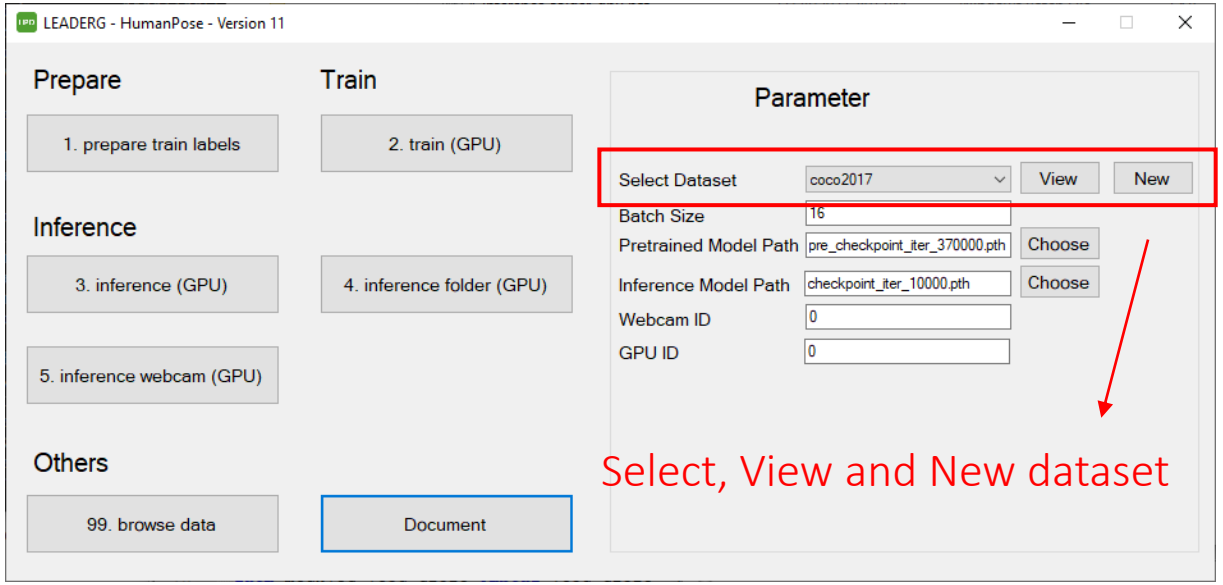
Select dataset -> preprocessing (prepare images, label images, generate training files) -> training -> inference images



Select dataset

Select the dataset to train or infer.

- The "View" button next to the pull-down menu can open the data folder location, which is convenient for users to confirm and modify.
- If you want to create a new dataset by yourself, please press the "New" button, enter the dataset name in the pop-up window (only English and numbers can be used as the dataset name), and press "OK" to complete the creation, that is The name you just entered can be found in the pull-down menu.

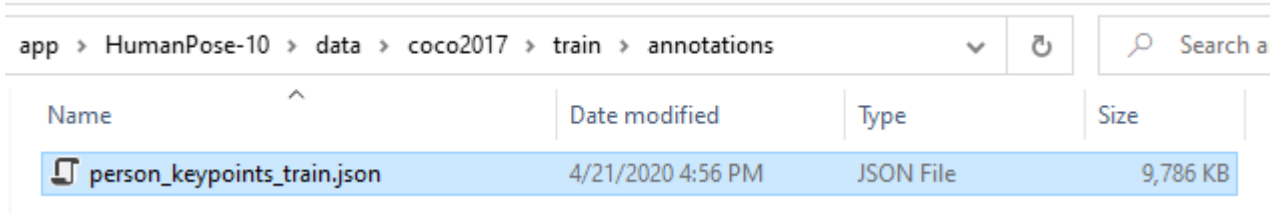


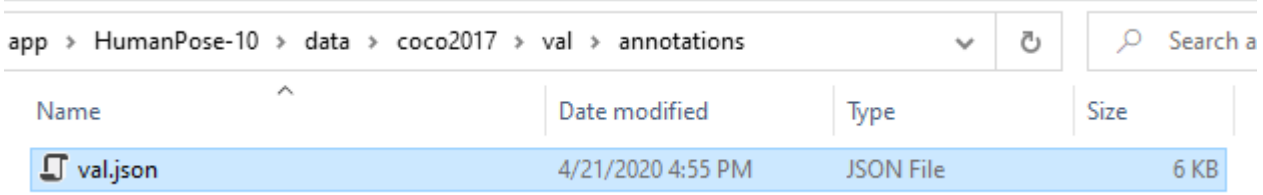
Preparing and labeling images

The dataset provided by the APP is the coco 2017 val dataset.

If users want to train by themselves, they can download other coco datasets. The format of the label file is object keypoints json format. The training json annotation file should be placed in "your dataset name/train/annotations" and renamed to "person_keypoints_train.json" .

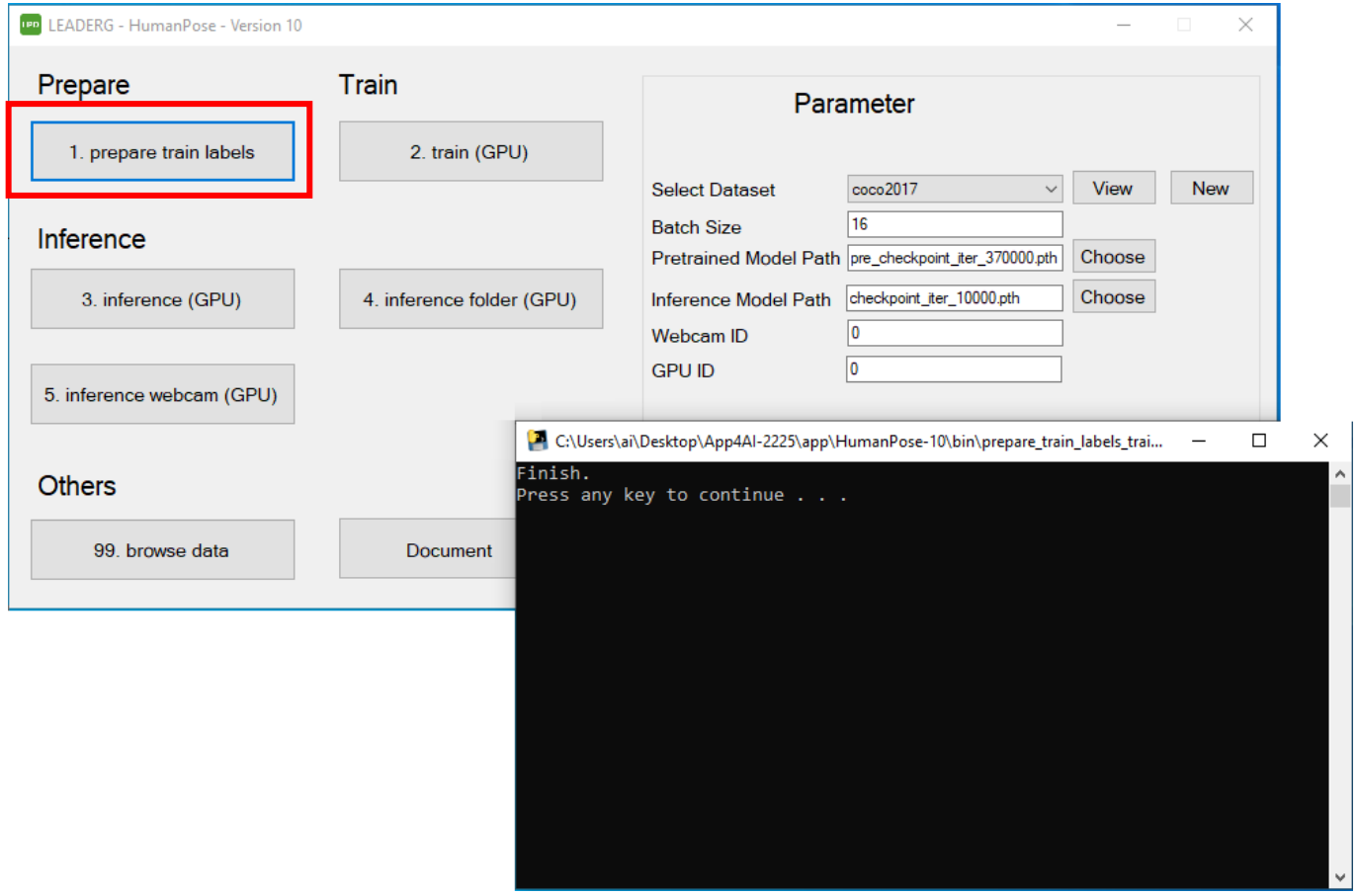
The validated dataset tag file is placed in "your dataset name/val/annotations" and renamed to "val.json.





1. prepare train labels

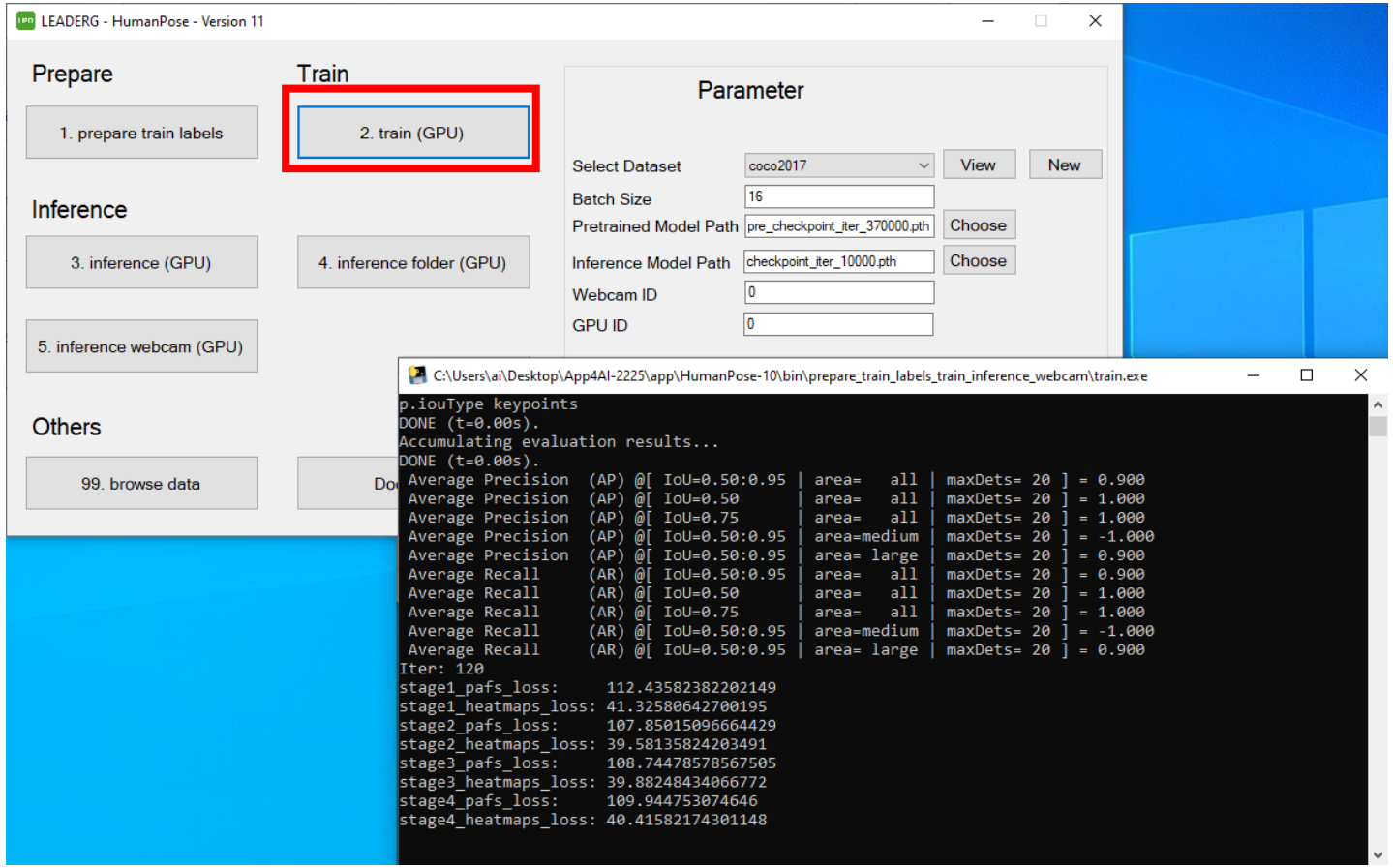
Generate the pkl files needed for training.



2. train (GPU)

Start training.

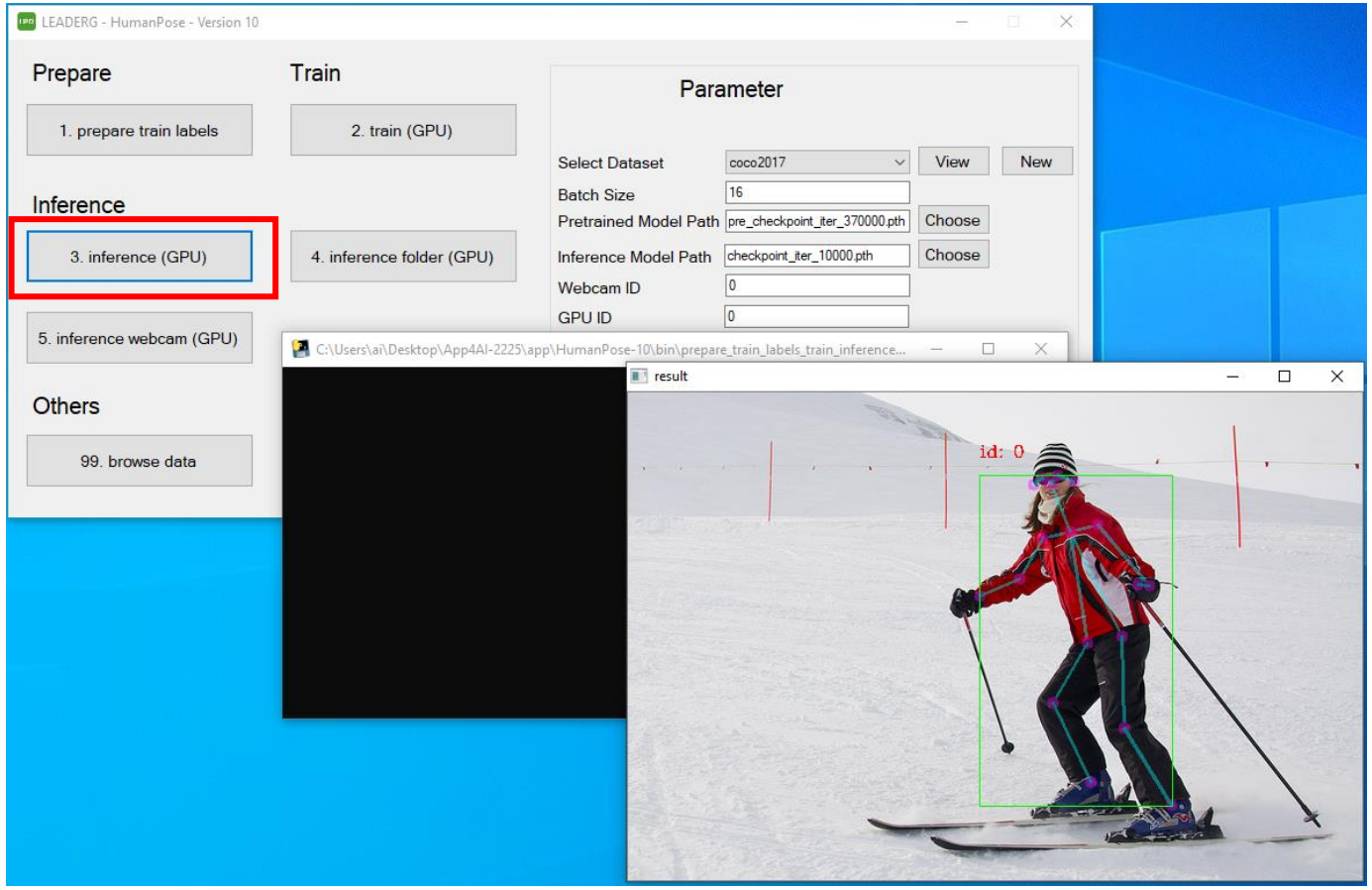
Before training, you can select the model to be used as the pretrained model in Parameter -> Pretrained Model Path



3. inference (GPU)

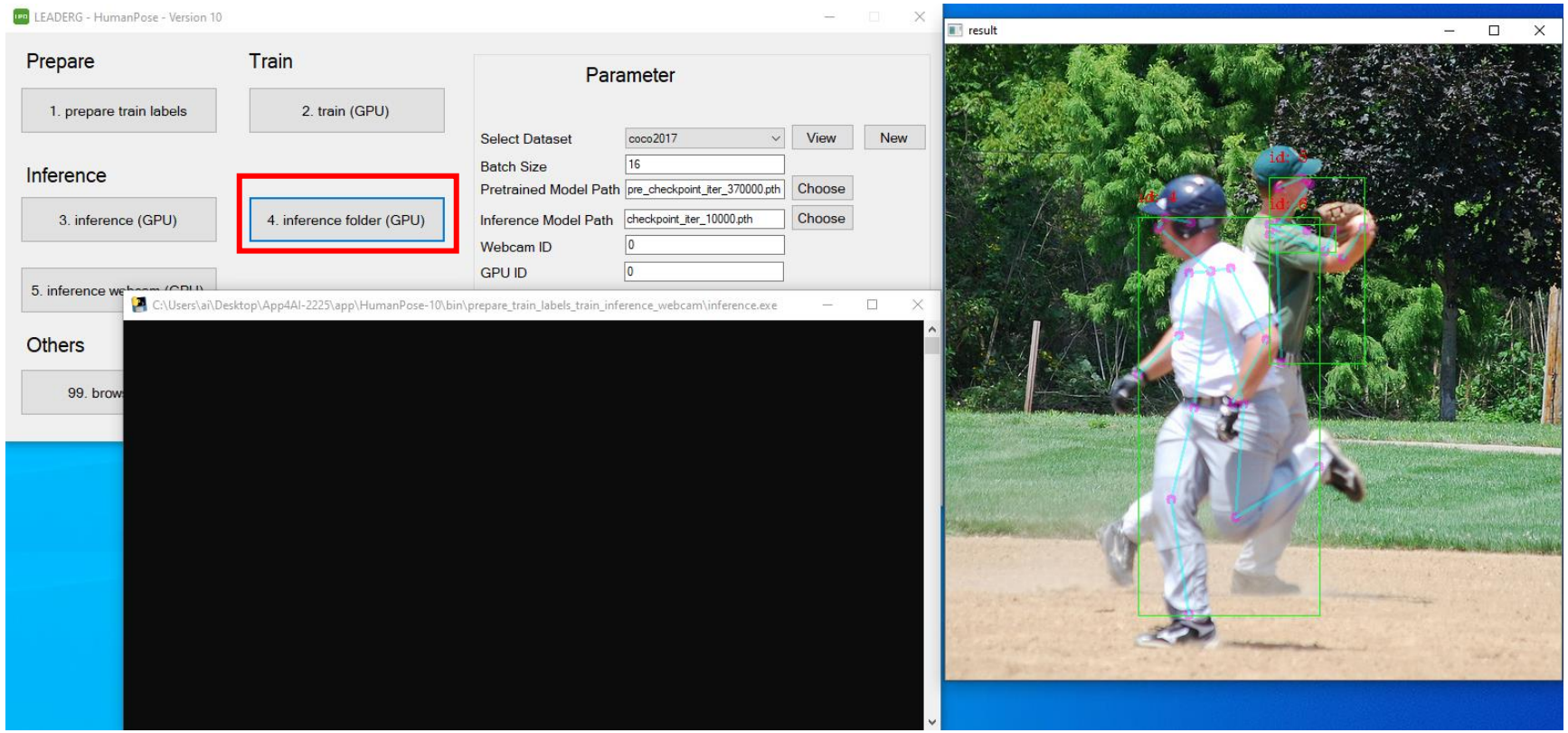
Infer a single image.

Before inference, the model to be inferred can be selected in Parameter -> Inference Model Path.



4. inference folder (GPU)

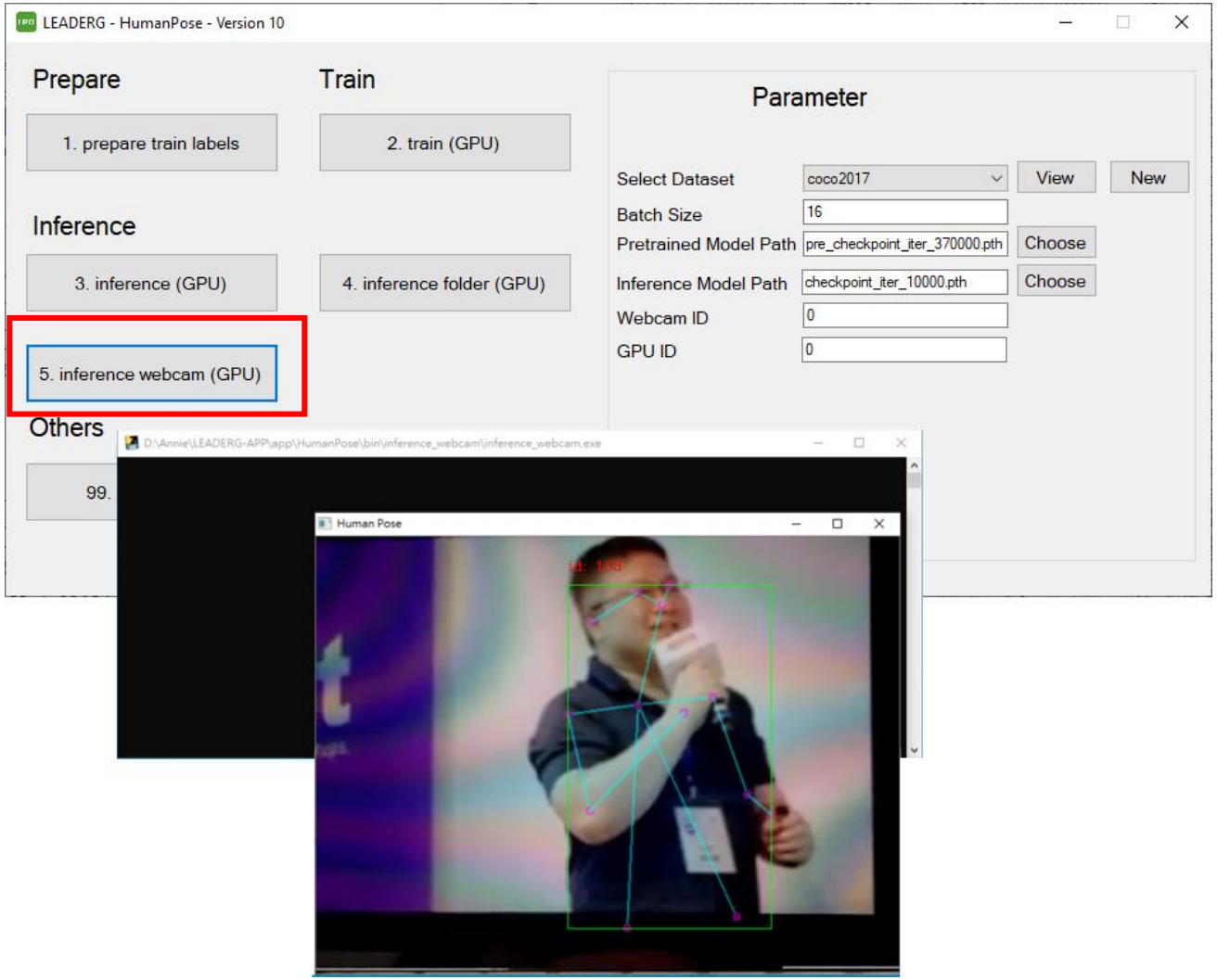
Infer all images in the folder, press any key on the display window to view the next image result. Before inference, the model to be inferred can be selected in Parameter -> Inference Model Path.



5. inference webcam (GPU)

Infer the image of the webcam.

Press the “Esc” key on the display to turn the webcam off.



Reference

- Please refer to the readme.txt in the APP folder.
- LEADERG AppForAI: https://www.leaderg.com/appforai-windows
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