测试环境:

YOLOv5 🚀 2022-5-18 Python-3.6.13 torch-1.10.1+cu102 CUDA:0 (GeForce RTX 2070 SUPER, 7982MiB)

**测试结果 PyTorch：**

python yolov5/detect.py --weights ckps/yolov5n\_pruned.pt --source images/mask/ --project images/out/mask --line-thickness=1

detect: weights=['ckps/yolov5n\_pruned.pt'], source=images/mask/, data=yolov5/data/coco128.yaml, imgsz=[640, 640], conf\_thres=0.25, iou\_thres=0.45, max\_det=1000, device=, view\_img=False, save\_txt=False, save\_conf=False, save\_crop=False, nosave=False, classes=None, agnostic\_nms=False, augment=False, visualize=False, update=False, project=images/out/mask, name=exp, exist\_ok=False, line\_thickness=1, hide\_labels=False, hide\_conf=False, half=False, dnn=False

YOLOv5 🚀 2022-5-18 Python-3.6.13 **torch-1.10.1+cu102 CUDA**:0 (GeForce **RTX 2070 SUPER**, **7982MiB**)

**custom\_YOLOv5s\_3\_nano summary: 213 layers, 215775 parameters, 3024 gradients, 1.7 GFLOPs**

image 1/10 images/mask/mask01.jpg: 640x512 1 mask, Done. (0.006s)

image 2/10 images/mask/mask02.jpg: 640x512 1 mask, Done. (0.005s)

image 3/10 images/mask/mask03.jpg: 640x512 1 mask, Done. (0.005s)

image 4/10 images/mask/mask04.jpg: 640x512 1 mask, Done. (0.005s)

image 5/10 images/mask/mask05.jpg: 640x512 1 mask, Done. (0.005s)

image 6/10 images/mask/mask06.jpg: 640x512 1 mask, Done. (0.005s)

image 7/10 images/mask/mask07.jpg: 640x512 1 mask, Done. (0.005s)

image 8/10 images/mask/mask08.jpg: 640x512 1 mask, Done. (0.005s)

image 9/10 images/mask/mask09.jpg: 640x512 1 mask, Done. (0.005s)

image 10/10 images/mask/mask10.jpg: 640x512 1 mask, Done. (0.005s)

Speed: 0.4ms pre-process, 4.9ms inference, 0.8ms NMS per image at shape (1, 3, **640, 640**)

**测试结果 ONNX：**

python yolov5/detect.py --weights ckps/yolov5n\_pruned.onnx --source images/mask/ --project images/out/mask --line-thickness=1

detect: weights=['ckps/yolov5n\_pruned.onnx'], source=images/mask/, data=yolov5/data/coco128.yaml, imgsz=[640, 640], conf\_thres=0.25, iou\_thres=0.45, max\_det=1000, device=, view\_img=False, save\_txt=False, save\_conf=False, save\_crop=False, nosave=False, classes=None, agnostic\_nms=False, augment=False, visualize=False, update=False, project=images/out/mask, name=exp, exist\_ok=False, line\_thickness=1, hide\_labels=False, hide\_conf=False, half=False, dnn=False

YOLOv5 🚀 2022-5-18 Python-3.6.13 torch-1.10.1+cu102 CUDA:0 (GeForce RTX 2070 SUPER, 7982MiB)

Loading ckps/yolov5n\_pruned.onnx for ONNX Runtime inference...

image 1/10 images/mask/mask01.jpg: 640x640 1 mask, Done. (0.007s)

image 2/10 images/mask/mask02.jpg: 640x640 1 mask, Done. (0.007s)

image 3/10 images/mask/mask03.jpg: 640x640 1 mask, Done. (0.006s)

image 4/10 images/mask/mask04.jpg: 640x640 1 mask, Done. (0.006s)

image 5/10 images/mask/mask05.jpg: 640x640 1 mask, Done. (0.006s)

image 6/10 images/mask/mask06.jpg: 640x640 1 mask, Done. (0.006s)

image 7/10 images/mask/mask07.jpg: 640x640 1 mask, Done. (0.006s)

image 8/10 images/mask/mask08.jpg: 640x640 1 mask, Done. (0.006s)

image 9/10 images/mask/mask09.jpg: 640x640 1 mask, Done. (0.006s)

image 10/10 images/mask/mask10.jpg: 640x640 1 mask, Done. (0.006s)

Speed: 0.4ms pre-process, 5.9ms inference, 0.9ms NMS per image at shape (1, 3, 640, 640)

**测试结果 PyTorch Original：**

python yolov5/detect.py --weights ckps/yolov5n.pt --source images/mask/ --project images/out/mask --line-thickness=1

detect: weights=['ckps/yolov5n.pt'], source=images/mask/, data=yolov5/data/coco128.yaml, imgsz=[640, 640], conf\_thres=0.25, iou\_thres=0.45, max\_det=1000, device=, view\_img=False, save\_txt=False, save\_conf=False, save\_crop=False, nosave=False, classes=None, agnostic\_nms=False, augment=False, visualize=False, update=False, project=images/out/mask, name=exp, exist\_ok=False, line\_thickness=1, hide\_labels=False, hide\_conf=False, half=False, dnn=False

YOLOv5 🚀 2022-5-18 Python-3.6.13 torch-1.10.1+cu102 CUDA:0 (GeForce RTX 2070 SUPER, 7982MiB)

**YOLOv5n summary: 213 layers, 1867405 parameters, 0 gradients, 4.5 GFLOPs**

image 1/10 images/mask/mask01.jpg: 640x512 1 person, Done. (0.005s)

image 2/10 images/mask/mask02.jpg: 640x512 1 person, Done. (0.005s)

image 3/10 images/mask/mask03.jpg: 640x512 1 person, Done. (0.005s)

image 4/10 images/mask/mask04.jpg: 640x512 1 person, Done. (0.005s)

image 5/10 images/mask/mask05.jpg: 640x512 1 person, Done. (0.005s)

image 6/10 images/mask/mask06.jpg: 640x512 1 person, Done. (0.005s)

image 7/10 images/mask/mask07.jpg: 640x512 1 person, Done. (0.005s)

image 8/10 images/mask/mask08.jpg: 640x512 1 person, Done. (0.005s)

image 9/10 images/mask/mask09.jpg: 640x512 1 person, Done. (0.005s)

image 10/10 images/mask/mask10.jpg: 640x512 1 person, Done. (0.005s)

Speed: 0.3ms pre-process, 4.8ms inference, 0.8ms NMS per image at shape (1, 3, 640, 640)

**测试结果 ONNX Original：**

python yolov5/detect.py --weights ckps/yolov5n.onnx --source images/mask/ --project images/out/mask --line-thickness=1

detect: weights=['ckps/yolov5n.onnx'], source=images/mask/, data=yolov5/data/coco128.yaml, imgsz=[640, 640], conf\_thres=0.25, iou\_thres=0.45, max\_det=1000, device=, view\_img=False, save\_txt=False, save\_conf=False, save\_crop=False, nosave=False, classes=None, agnostic\_nms=False, augment=False, visualize=False, update=False, project=images/out/mask, name=exp, exist\_ok=False, line\_thickness=1, hide\_labels=False, hide\_conf=False, half=False, dnn=False

YOLOv5 🚀 2022-5-18 Python-3.6.13 torch-1.10.1+cu102 CUDA:0 (GeForce RTX 2070 SUPER, 7982MiB)

Loading ckps/yolov5n.onnx for ONNX Runtime inference...

image 1/10 images/mask/mask01.jpg: 640x640 1 person, Done. (0.012s)

image 2/10 images/mask/mask02.jpg: 640x640 1 person, Done. (0.012s)

image 3/10 images/mask/mask03.jpg: 640x640 1 person, Done. (0.011s)

image 4/10 images/mask/mask04.jpg: 640x640 1 person, Done. (0.011s)

image 5/10 images/mask/mask05.jpg: 640x640 1 person, Done. (0.011s)

image 6/10 images/mask/mask06.jpg: 640x640 1 person, Done. (0.011s)

image 7/10 images/mask/mask07.jpg: 640x640 1 person, Done. (0.011s)

image 8/10 images/mask/mask08.jpg: 640x640 1 person, Done. (0.011s)

image 9/10 images/mask/mask09.jpg: 640x640 1 person, Done. (0.011s)

image 10/10 images/mask/mask10.jpg: 640x640 1 person, Done. (0.011s)

Speed: 0.5ms pre-process, 11.4ms inference, 1.1ms NMS per image at shape (1, 3, 640, 640)