

AlphaPose

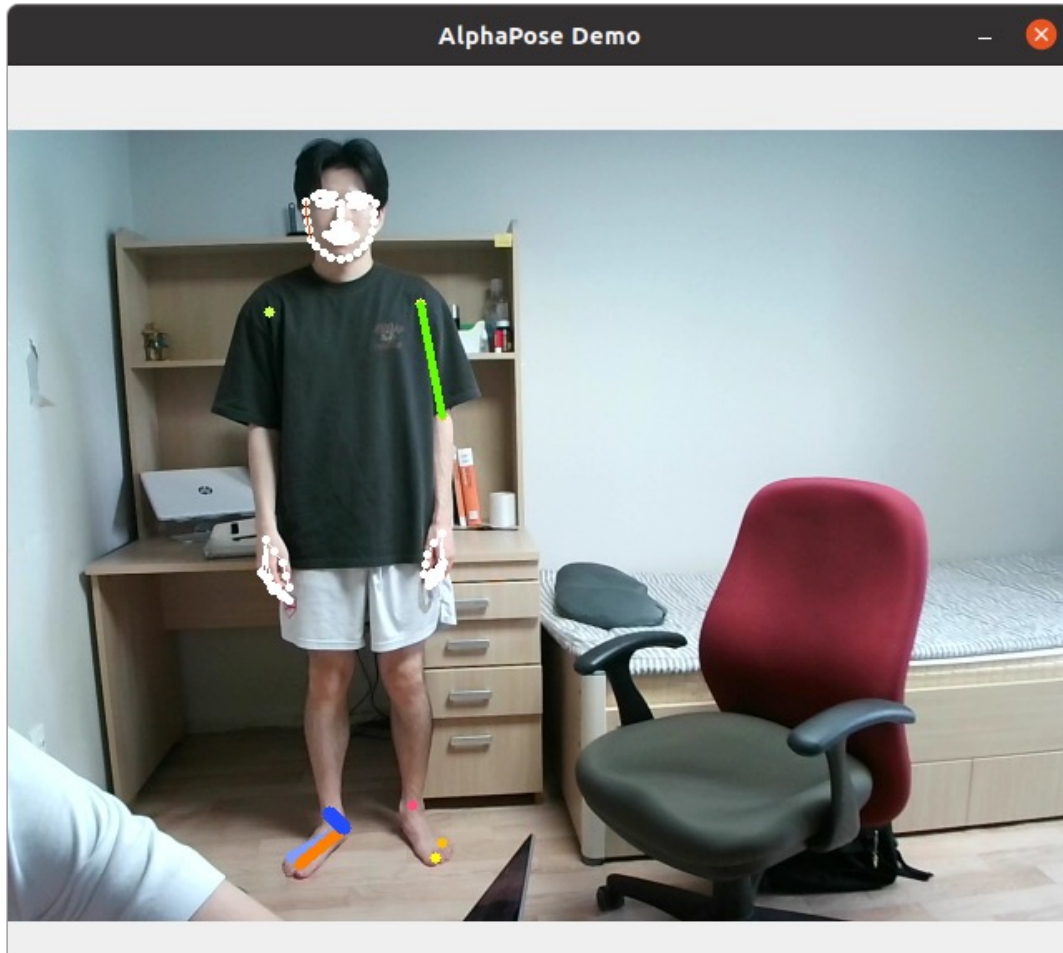
MSCOCO 데이터셋 모델 성능



01 얼굴 손, 발 인식 미지원

02 인식하는 부분이 적은만큼 빠름

Halpe 데이터셋 모델 성능

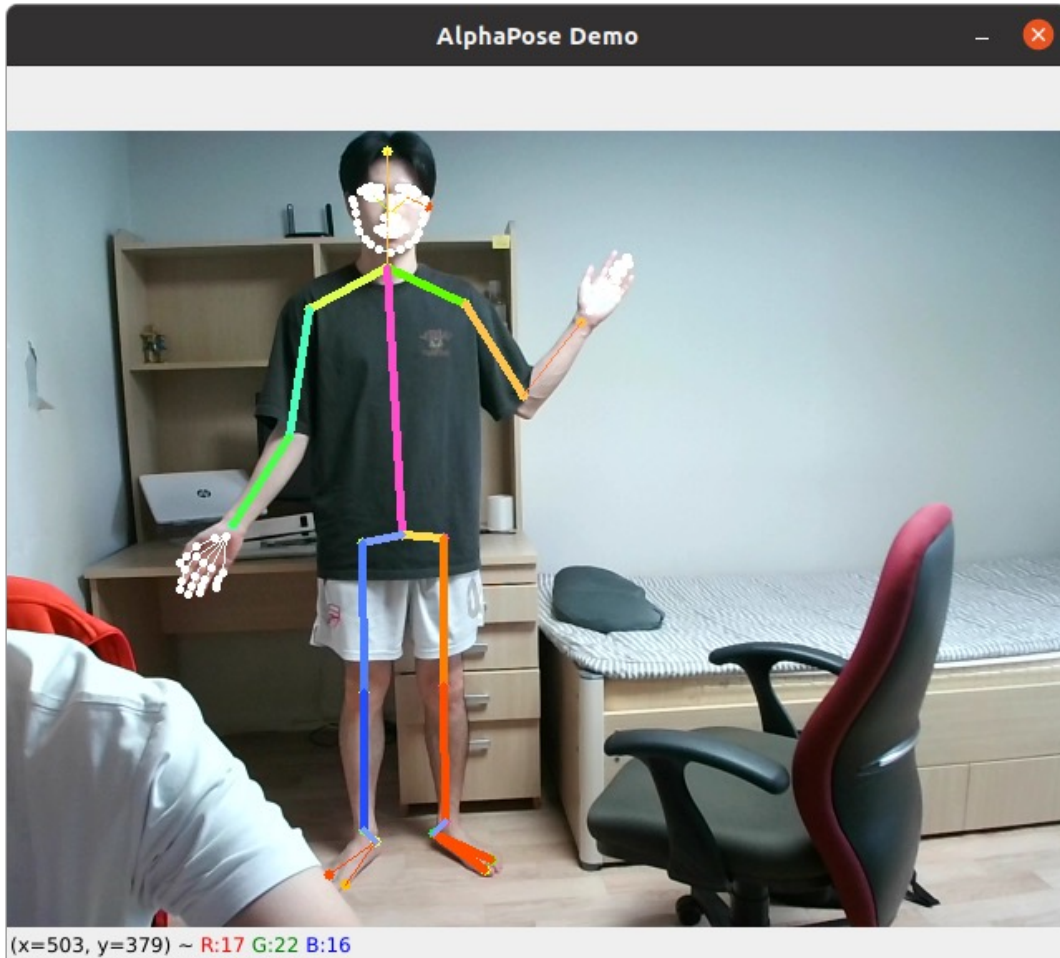


인식 성능이 좋지 않음



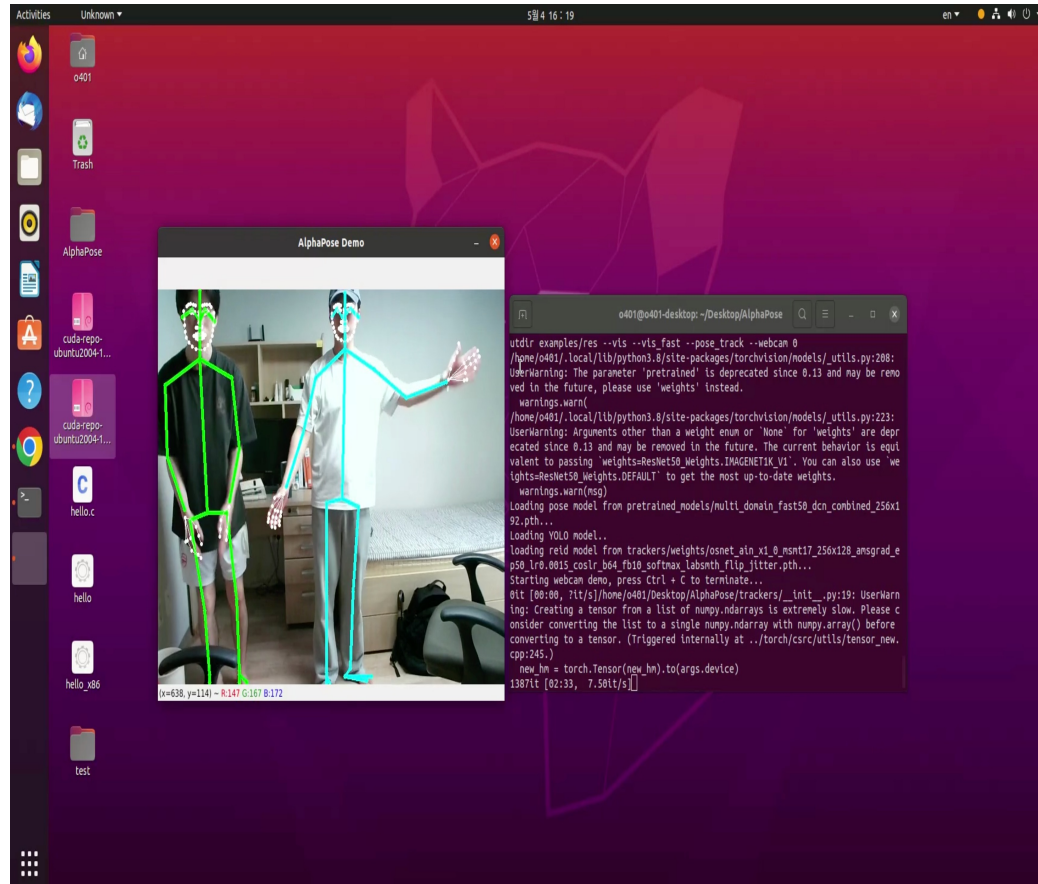
인식을 잘 되지만 몸통 인식 미지원

COCO-WholeBody 데이터셋 모델 성능



두 모델 모두 손과 발, 그리고 얼굴까지 지원이 잘 됨

Multi_Domain 데이터셋 모델 성능



Fast Pose (DCN)	ResNet50 - dcn	YOLOv3	256x192	Combined (10 hand weight)	49.8	10.35 iter/s	Google Baidu(code: app1)	cfg	136
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Fast Pose (DCN)	ResNet50 - dcn	YOLOv3	256x192	Combined	-	13.88 iter/s	Google Baidu(code: 6kwr)	cfg	68 (no face)
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o401

Trash

AlphaPose

cuda-repo-ubuntu2004-1...

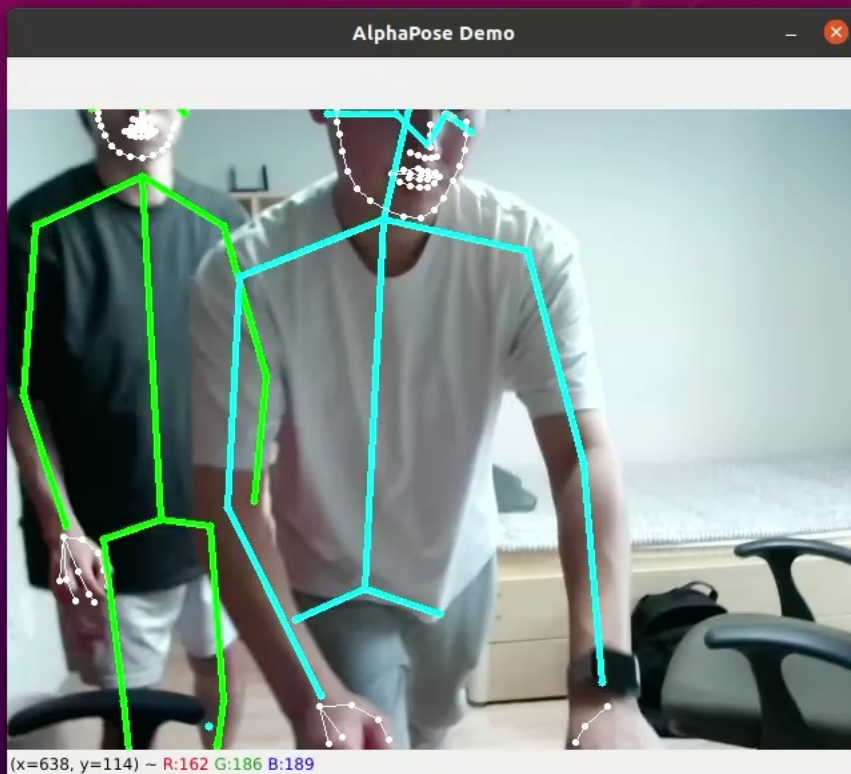
cuda-repo-ubuntu2004-1...

hello.c

hello

hello_x86

test



```
o401@o401-desktop: ~/Desktop/AlphaPose
utdir examples/res --vis --vis_fast --pose_track --webcam 0
/home/o401/.local/lib/python3.8/site-packages/torchvision/models/_utils.py:208:
UserWarning: The parameter 'pretrained' is deprecated since 0.13 and may be removed in the future, please use 'weights' instead.
  warnings.warn(
/home/o401/.local/lib/python3.8/site-packages/torchvision/models/_utils.py:223:
UserWarning: Arguments other than a weight enum or 'None' for 'weights' are deprecated since 0.13 and may be removed in the future. The current behavior is equivalent to passing 'weights=ResNet50_Weights.IMAGENET1K_V1'. You can also use 'weights=ResNet50_Weights.DEFAULT' to get the most up-to-date weights.
  warnings.warn(msg)
Loading pose model from pretrained_models/multi_domain_fast50_dcn_combined_256x192.pth...
Loading YOLO model..
loading reid model from trackers/weights/osnet_ain_x1_0_msmt17_256x128_amsgrad_epoch50_lr0.0015_coslr_b64_fb10_softmax_labsmth_flip_jitter.pth...
Starting webcam demo, press Ctrl + C to terminate...
0it [00:00, ?it/s]/home/o401/Desktop/AlphaPose/trackers/__init__.py:19: UserWarning: Creating a tensor from a list of numpy.ndarrays is extremely slow. Please consider converting the list to a single numpy.ndarray with numpy.array() before converting to a tensor. (Triggered internally at ../torch/csrc/autograd/utils/tensor_new.cpp:245.)
  new_hm = torch.Tensor(new_hm).to(args.device)
1319it [02:24, 8.08it/s]
```


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Trash

AlphaPose

cuda-repo-ubuntu2004-1...

cuda-repo-ubuntu2004-1...

hello.c

hello

hello_x86

test

AlphaPose Demo

(x=597, y=4) ~ R:150 G:179 B:187

o401@o401-desktop: ~/Desktop/AlphaPose

```

res --vis --vis_fast --pose_track --webcam 0
/home/o401/.local/lib/python3.8/site-packages/torchvision/models/_utils.py:208:
UserWarning: The parameter 'pretrained' is deprecated since 0.13 and may be removed
in the future, please use 'weights' instead.
  warnings.warn(
/home/o401/.local/lib/python3.8/site-packages/torchvision/models/_utils.py:223:
UserWarning: Arguments other than a weight enum or 'None' for 'weights' are depr
ecated since 0.13 and may be removed in the future. The current behavior is equi
valent to passing 'weights=ResNet50_Weights.IMAGENET1K_V1'. You can also use 'we
ights=ResNet50_Weights.DEFAULT' to get the most up-to-date weights.
  warnings.warn(msg)
Loading pose model from pretrained_models/noface_fast50_dcn_combined_256x192.pth
...
Loading YOLO model..
loading reid model from trackers/weights/osnet_ain_x1_0_msmt17_256x128_amsgrad_e
p50_lr0.0015_coslr_b64_fb10_softmax_labsmth_flip_jitter.pth...
Starting webcam demo, press Ctrl + C to terminate...
0it [00:00, ?it/s]/home/o401/Desktop/AlphaPose/trackers/__init__.py:19: UserWarn
ing: Creating a tensor from a list of numpy.ndarrays is extremely slow. Please c
onsider converting the list to a single numpy.ndarray with numpy.array() before
converting to a tensor. (Triggered internally at ../torch/csrc/autograd/tensor_new.
cpp:245.)
  new_hm = torch.Tensor(new_hm).to(args.device)
666it [01:06, 9.28it/s]

```

좌표값 확인

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1 {'imgname': '4.jpeg', 'result': [{'keypoints':  
  tensor([[ 766.9642, 1835.9657],  
2          [ 790.5078, 1788.8787],  
3          [ 743.4207, 1812.4222],  
4          [ 884.6818, 1788.8787],  
5          [ 719.8771, 1859.5093],  
6          [1096.5736, 1977.2269],  
7          [ 696.3336, 2118.4880],  
8          [1214.2911, 2236.2056],  
9          [ 672.7901, 2424.5540],  
10         [1096.5736, 2471.6409],  
11         [ 884.6818, 2424.5540],  
12         [1096.5736, 2730.6196],  
13         [ 861.1383, 2754.1633],  
14         [1073.0300, 3201.4902],  
15         [ 837.5948, 3248.5771],  
16         [1073.0300, 3648.8171],  
17         [ 743.4207, 3695.9043],  
18         [ 743.4207, 1694.7046],  
19         [ 861.1383, 1953.6833],  
20         [ 978.8560, 2683.5327],  
21         [1167.2041, 3837.1655],  
22         [ 672.7901, 3860.7090],  
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24         [ 625.7031, 3837.1655],  
25         [1025.9430, 3672.3608],  
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28         [ 715.7009, 1853.1079],  
29         [ 723.9081, 1871.5841],  
30         [ 734.5558, 1892.0051],  
31         [ 745.8737, 1910.2135],  
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33         [ 774.3386, 1929.7303],  
34         [ 794.0245, 1931.2439],  
35         [ 815.5004, 1925.3076],  
36         [ 835.9277, 1909.8767],
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1812.4222412109375, 0.9469705820083618, 884.  
6818237304688, 1788.878662109375, 0.9746145009994507,  
719.8771362304688, 1859.50927734375, 0.  
9662519693374634, 1096.5736083984375, 1977.  
2269287109375, 0.932277500629425, 696.3336181640625,  
2118.488037109375, 0.8195713758468628, 1214.  
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640869140625, 0.8028600215911865, 884.6818237304688,  
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861.1383056640625, 2754.163330078125, 0.  
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9679005742073059, 1167.2041015625, 3837.16552734375,  
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1853.10791015625, 0.6677282452583313, 723.  
9081420898438, 1871.5841064453125, 0.
```


결론

1

데이터셋들의 모델들이 대부분 준수한 성능을 보여줌

2

사람이 추가될 수록 성능이 안 좋아짐

3

출력된 좌표값을 어떻게 활용할 것인지 알아야 함