



Deep Learning Based Graph Matching

——implemented with pygmtools and jittor

AI3607 深度学习及应用

2022.12.20

汇报人：孙一林 520030910361

饮水思源 · 爱国荣校



Dataset: pipeline



Raw

Motorbikes_001a

Motorbikes_002a

Pairs(Name)

`pygm.dataset`

`-suffix.json`
`train.json`
`test.json`

JSON

`bm.get_data`



Pairs(Image, Label, etc.)

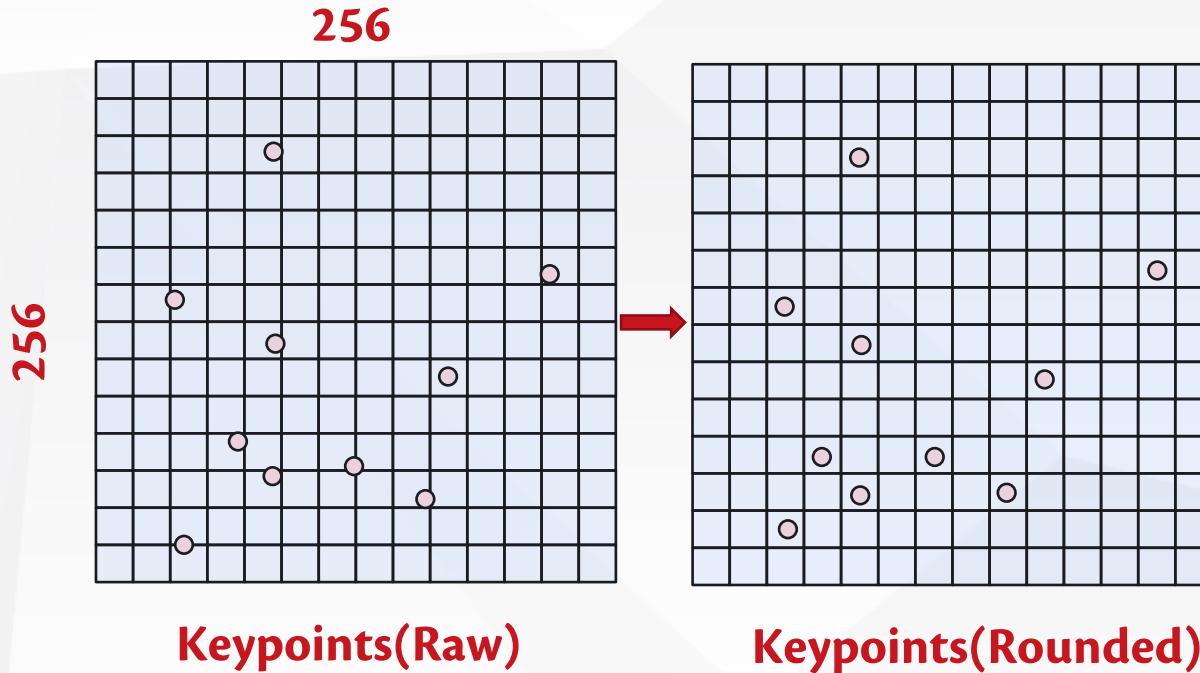




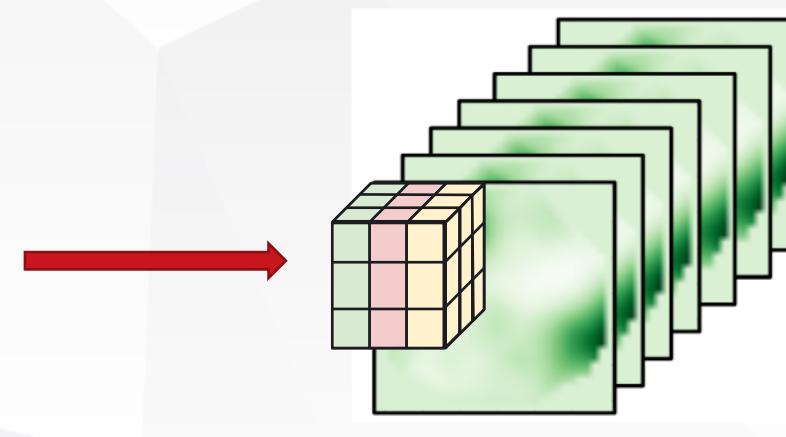
Model and Training: modification



1. Be careful with the keypoints



2. Tackle batched data



**feature_upsample
(bs*1024*256*256)**





Evaluation: need-to-know



1.What happens when we call 'bm.get_data' ?

```
self.benchmark.get_data(self.data[index][0], shuffle=self.shuffle)
```

```
if shuffle:  
    random.shuffle(obj_dict['kpts'])
```

2.How can the benchmark evaluate the result?

```
if self.sets == 'test':  
    for pair in id_combination:  
        id_pair = (ids[pair[0]], ids[pair[1]])  
        gt_path = os.path.join(self.gt_cache_path, str(id_pair) + '.npy')  
        if not os.path.exists(gt_path):  
            np.save(gt_path, perm_mat_dict[pair])
```

3.How can we use pygm.benchmark properly?

→Load the entire test dataset VS Avoid shuffle when testing





上海交通大学
SHANGHAI JIAO TONG UNIVERSITY

Thanks!



饮水思源 爱国荣校