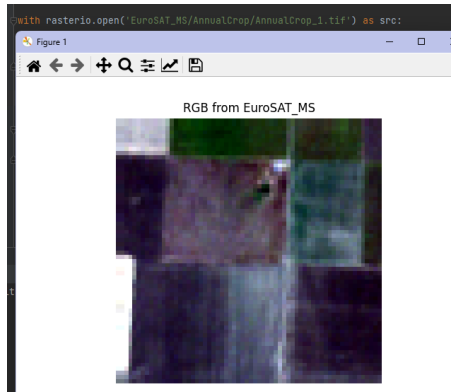


Dataset:

[EuroSAT: 一种用于土地利用和土地覆盖分类的新型数据集和深度学习基准](#) --- [EuroSAT: A Novel Dataset and Deep Learning Benchmark for Land Use and Land Cover Classification](#)

EuroSAT\_MS.zip contains the multi-spectral version of the EuroSAT dataset, which includes all 13 Sentinel-2 bands in the original value range.

Tif file (shown in RGB)



Train : Test=0.8 : 0.2

Network:

**resnet18**, modified to support input of 13\*32\*32

resnet50, for dilution

Output

net.py

resnet18\_10classes\_10epoch\_standard.pth

Train with resnet18, with **no** data argumentation and dilution

Resnet18 epoch 10, test accuracy: **89.57%**

```
Testing: 98%|██████████| 83/85 [00:38<00:00, 20.51it/s, acc=89.5]
Testing: 98%|██████████| 83/85 [00:38<00:00, 20.51it/s, acc=89.6]
Training Progress: 100%|██████████| 10/10 [12:05<00:00, 72.59s/it, acc=96.5, loss=36.3]
Test Accuracy: 89.57%

进程已结束,退出代码0
```

teacher.py, net\_pro.py

resnet50\_teacher\_10classes\_20epoch\_epoch20.pth

resnet18\_10classes\_10epoch\_student\_epoch10.pth

Train with teacher resnet50(teacher Test Accuracy: 93.09%) and resnet18, with data **argumentation** and **dilution**

Resnet18 epoch 10, test accuracy: **96.65%**

```
Testing: 96%|██████████| 82/85 [00:20<00:00, 24.52it/s, acc=96.6]
Test Accuracy: 96.65%
Training Progress: 100%|██████████| 10/10 [15:09<00:00, 90.99s/it, acc=97.2, loss=186]

进程已结束,退出代码0
```