

Training one class without inclination images

Training each class individually for 30 epochs (1.5h for UNet, 6h for DeepLabV3 and FCN)

Mean and std values: From our dataset*

Learning rate: 1e-5

batch size: 4

epochs: 30

number of classes: 1

| Methods | Class | | | Mean Dice |
|-----------|------------|------------|---------|-----------|
| | Roads | Structures | Terrain | |
| UNet | 0.448053** | | | |
| DeepLabV3 | 0.778905 | 0.812893 | | |
| FCN | | | | |

| Methods | Class | | | Mean IoU |
|-----------|------------|------------|---------|----------|
| | Roads | Structures | Terrain | |
| UNet | 0.404188** | | | |
| DeepLabV3 | 0.739238 | 0.749458 | | |
| FCN | | | | |

Training multiple classes without inclination images

Training multiple classes for 30 epochs (1.5h for UNet, 6h for DeepLabV3 and FCN)

Mean and std values: From our dataset*

Learning rate: 1e-5

batch size: 4

epochs: 30

number of classes: 3 (Roads, Structure, Terrain)

| Methods | Class | | | Mean Dice |
|-----------|------------|------------|----------|-----------|
| | Roads | Structures | Terrain | |
| UNet | 0.008320** | 0.401943 | 0.619357 | 0.343207 |
| DeepLabV3 | 0.837661 | 0.824890 | 0.812150 | 0.824901 |
| FCN | 0.835571 | 0.809814 | 0.738332 | 0.794573 |

| Methods | Class | | | Mean IoU |
|-----------|------------|------------|----------|----------|
| | Roads | Structures | Terrain | |
| UNet | 0.008310** | 0.401662 | 0.617728 | 0.342566 |
| DeepLabV3 | 0.759808 | 0.763265 | 0.771159 | 0.764745 |
| FCN | 0.758748 | 0.745964 | 0.696425 | 0.733713 |

*Should test results with mean and std from ImageNet for DeepLabV3 and FCN since these use pretrained models (can be set to false in fcn.py line 16 and deeplabv3.py line 17)

**Multiclass results do not correlate with individual tests (Mean dice and IoU of UNet should be higher). Should check loss function for multiclass