Augmentations report

Here are results from augmentation gridsearch for:

- fcn_resnet50
- unet3+

Epoch count: 50
Early stopping: 5

Deeplabv3 model was not tested in this case, since in all previous runs it showed lower test scores than fcn_renset50.
Each run was intended to check augmentation need.

Rotation

Unet3+ achieved overfit in 36 epochs with rotation 0.

Model	Augmentation value	test IoU	test IoU background	test Io
fcn_resnet50	0	0.864663	0.865247	0.9143
	0.5	0.830565	0.847259	0.8591
unet3+	0	0.839787	0.847578	0.9003
	0.5	0.858751	0.860241	0.9195

Brightness

Fcn_resnet50 achieved overfit in 45 epochs with brightness 0.5.
Low results could come from overfit, since on "best IoU" metric results are high.
So, with brightness 0.5 for fcn_resnet50, early stopping value should be lower.

Model	Augmentation value	test IoU	test IoU background	test Io
fcn_resnet50	0	0.864663	0.865247	0.9143
	0.5	0.667049	0.662114	0.6800
unet3+	0	0.836371	0.853659	0.8779
	0.5	0.858751	0.860241	0.9195

Contrast

Model	Augmentation value	test IoU	test IoU background	test Io
fcn_resnet50	0	0.864663	0.865247	0.9143
	0.5	0.853701	0.85135	0.9114
unet3+	0	0.836371	0.853659	0.8779
	0.5	0.850607	0.860306	0.9054

Perspective

Model	Augmentation value	test IoU	test IoU background	test Io
fcn_resnet50	0	0.864663	0.865247	0.9143
	0.5	0.844274	0.849084	0.9243
unet3+	0	0.836371	0.853659	0.8779
	0.5	0.844122	0.845185	0.9130

Noise

Model	Augmentation value	test IoU	test IoU background	test Io
fcn_resnet50	0	0.864663	0.865247	0.9143
	0.5	0.845995	0.850006	0.9099
unet3+	0	0.836371	0.853659	0.8779
	0.5	0.830422	0.826975	0.9089

Scale + Crop

Model	Augmentation value	test IoU	test IoU background	test Io
fcn_resnet50	0	0.864663	0.865247	0.9143
	0.5	0.872705	0.866648	0.9253
unet3+	0	0.836371	0.853659	0.8779
	0.5	0.84471	0.851321	0.9086