

Overfit

40 image overfit task:

D	L	M	N	O	AB	AI	AJ	AK	AL
id	batch_size	learning_rate	optimizer	is_dataset	UNET_dep	epoch	best_loss	best_IoU	best_f1
3	4	0.01	radam	FALSE	4	500	0.027727	0.95587	0.976548
6	4	0.001	radam	FALSE	4	500	0.026199	0.955864	0.97643
18	4	0.001	radam	TRUE	4	500	0.04341	0.942207	0.968894
2	4	0.01	radam	FALSE	3	500	0.046253	0.922854	0.956791
5	4	0.001	radam	FALSE	3	500	0.048589	0.907072	0.944199
9	4	0.0001	radam	FALSE	4	500	0.071776	0.90153	0.940336
15	4	0.01	radam	TRUE	4	500	0.089008	0.894391	0.936995
17	4	0.001	radam	TRUE	3	500	0.075241	0.890358	0.934541
14	4	0.01	radam	TRUE	3	500	0.080933	0.884164	0.929968
21	4	0.0001	radam	TRUE	4	500	0.103987	0.874626	0.921192
1	4	0.01	radam	FALSE	2	500	0.048429	0.818967	0.872087
4	4	0.001	radam	FALSE	2	500	0.050551	0.79542	0.848785
20	4	0.0001	radam	TRUE	3	500	0.137716	0.759131	0.819362
8	4	0.0001	radam	FALSE	3	500	0.081952	0.757865	0.810648
13	4	0.01	radam	TRUE	2	500	0.090297	0.745401	0.80685
16	4	0.001	radam	TRUE	2	500	0.089473	0.743548	0.79863
19	4	0.0001	radam	TRUE	2	500	0.152511	0.649141	0.715987
7	4	0.0001	radam	FALSE	2	389	0.097869	0.551343	0.572008
12	4	1.00E-05	radam	FALSE	4	333	0.380763	0.525859	0.552998
24	4	1.00E-05	radam	TRUE	4	268	0.832011	0.460822	0.498707
10	4	1.00E-05	radam	FALSE	2	308	0.513971	0.368162	0.380254
11	4	1.00E-05	radam	FALSE	3	229	0.877587	0.308985	0.340498
23	4	1.00E-05	radam	TRUE	3	51	3.07337	0.308212	0.322811
22	4	1.00E-05	radam	TRUE	2	51	2.391634	0.278844	0.335066

Trenēts uz UNet3+

Uz overfit weighted nav nozīme, jo modelis iemācas katru sample. Full train būs jātestē.

izmantojot 4 batch size, lai aizpildītu gpu atmiņu.

Starp unet depth 3 un 4, best_IoU atšķirība ir ~0.033.

Vislabākie lr ir 0.01 un 0.001, jāpārbauda vai 3e-2, 3e-3 un 3e-4 nav piemērotāki.

D	L	M	N	O	AB	AC	AD	AE	AI	AJ	AK	AL
id	batch_size	learning_rate	optimizer	is_dataset_weighted	unet_depth	expansion_ratio	first_conv_channels	channels	epoch	best_loss	best IoU	best f1
5	4	0.01	radam	FALSE	3	2	8	4	500	0.047575	0.912026	0.950085
14	4	0.001	radam	FALSE	3	2	8	8	500	0.052426	0.911029	0.949081
13	4	0.01	radam	FALSE	3	2	8	8	500	0.051811	0.907355	0.946667
6	4	0.001	radam	FALSE	3	2	8	4	500	0.05324	0.892958	0.934913
9	4	0.01	radam	FALSE	3	2	4	8	500	0.060835	0.888428	0.931501
10	4	0.001	radam	FALSE	3	2	4	8	500	0.06371	0.887312	0.931176
1	4	0.01	radam	FALSE	3	2	4	4	500	0.063677	0.869411	0.91514
2	4	0.001	radam	FALSE	3	2	4	4	500	0.071111	0.83736	0.88816
15	4	0.0001	radam	FALSE	3	2	8	8	500	0.080538	0.796317	0.851045
7	4	0.0001	radam	FALSE	3	2	8	4	500	0.091297	0.666513	0.714608
11	4	0.0001	radam	FALSE	3	2	4	8	392	0.137587	0.66239	0.724031
3	4	0.0001	radam	FALSE	3	2	4	4	500	0.114226	0.623072	0.642524
12	4	1.00E-05	radam	FALSE	3	2	4	8	235	1.068881	0.379488	0.428886
8	4	1.00E-05	radam	FALSE	3	2	8	4	214	1.080579	0.353077	0.394761
16	4	1.00E-05	radam	FALSE	3	2	8	8	251	0.834278	0.351101	0.407501
4	4	1.00E-05	radam	FALSE	3	2	4	4	51	3.602566	0.029488	0.054893

Ar first conv channel 8 ir vislabākie rezultāti.

channels for concat neietekmē rezultātus.

ja depth=3, first_conv_channels=8, concat_channels=4: param count = 23224

ja depth=3, first_conv_channels=8, concat_channels=8: param count = 36544

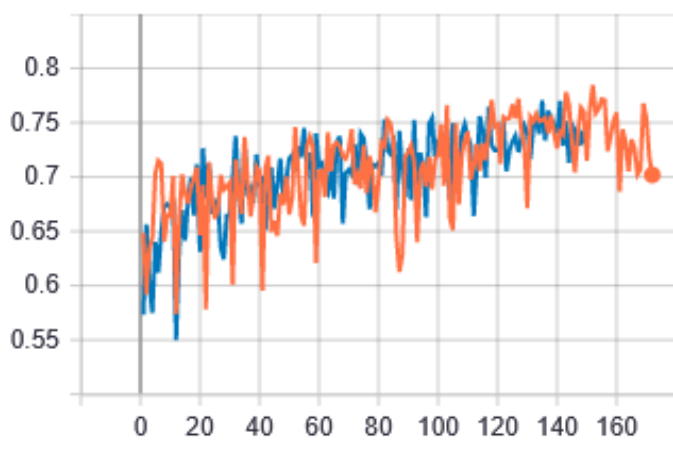
Secinājums:

izmantojot depth 4 modeli ar 8 first conv channels . param count = 120979

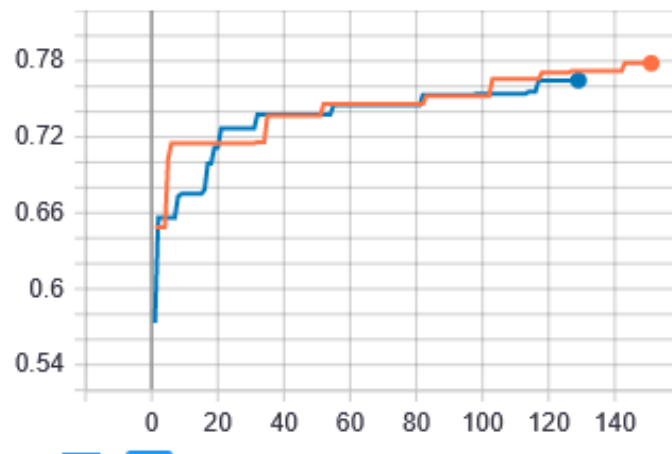
Full data overfit

Only two runs now.

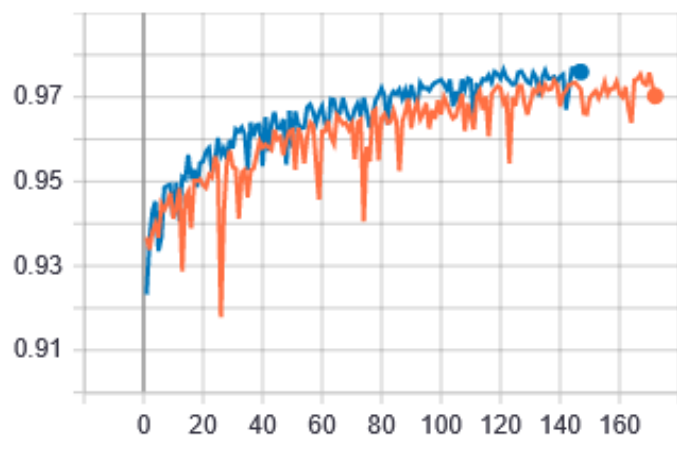
test_IoU



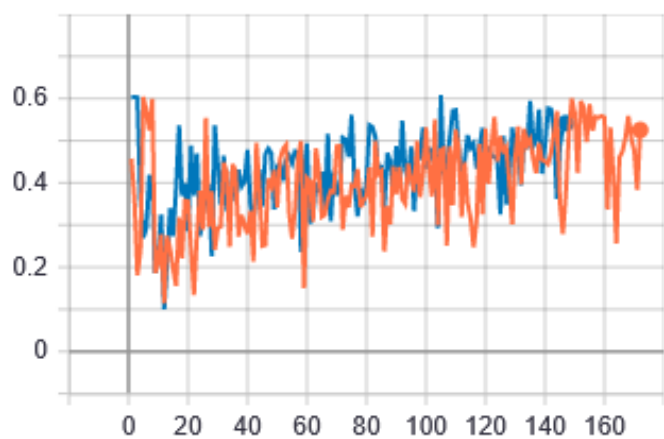
best_IoU



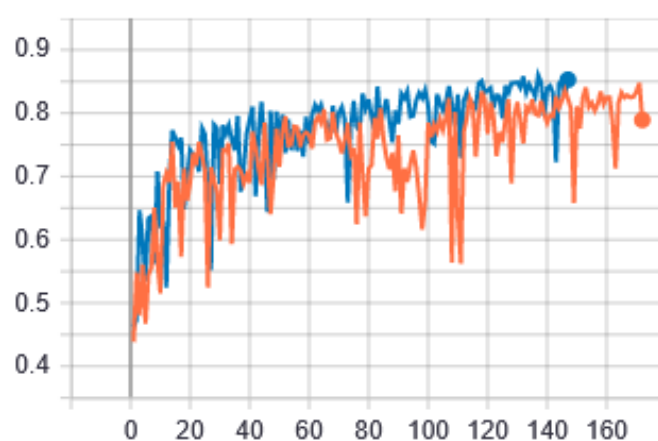
test_background_ioU



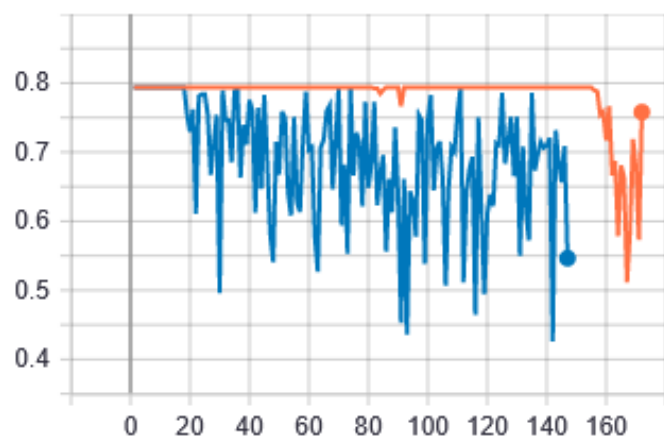
test_krasojums_ioU



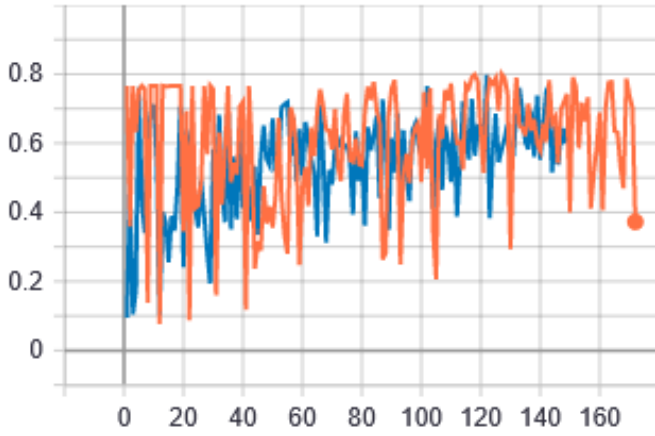
test_miza_ioU



test_plaisa_ioU



test_trupe_loU



test_zars_loU

