

Mainstream Segmentation Models for Rib Segmentation Data

Model	Internal Validation Data			External Test Data		
Deeplabv3+	precision	recall	F1-score	precision	recall	F1-score
L1	0.6941	0.6686	0.6811	0.6545	0.4861	0.5576
L2	0.7719	0.6696	0.7172	0.6458	0.5298	0.5822
L3	0.7827	0.7185	0.7494	0.5776	0.5592	0.5682
L4	0.7729	0.7116	0.7411	0.5775	0.5144	0.5442
L5	0.7863	0.7216	0.7526	0.5668	0.5263	0.5457
L6	0.7809	0.7238	0.7514	0.5219	0.5182	0.52
L7	0.7531	0.7406	0.7468	0.5306	0.5184	0.5246
L8	0.7396	0.7198	0.7295	0.5549	0.5135	0.5334
L9	0.7691	0.7081	0.7374	0.5472	0.5495	0.5485
L10	0.7487	0.6103	0.6723	0.5884	0.3839	0.4647
R1	0.6568	0.5807	0.6164	0.6478	0.4766	0.5491
R2	0.7569	0.6123	0.6768	0.6533	0.5314	0.5861
R3	0.7296	0.6477	0.6867	0.6134	0.5105	0.5572
R4	0.7757	0.6799	0.7248	0.6136	0.5336	0.5708
R5	0.7328	0.676	0.7034	0.6077	0.5555	0.5805
R6	0.728	0.7009	0.7142	0.5641	0.5392	0.5515
R7	0.7598	0.6978	0.7276	0.6018	0.5338	0.5657
R8	0.7434	0.7128	0.7278	0.6025	0.617	0.6097
R9	0.7272	0.7661	0.7461	0.5795	0.6129	0.5958
R10	0.7317	0.6704	0.6998	0.6082	0.4206	0.4973
Mean	0.7471	0.6869	0.7151	0.5929	0.5215	0.5526

Model	Internal Validation Data			External Test Data		
Efficientformer	precision	recall	F1-score	precision	recall	F1-score
L1	0.5155	0.3855	0.441	0.3683	0.1462	0.2093
L2	0.6429	0.3977	0.4912	0.3804	0.198	0.2604
L3	0.7127	0.3999	0.5123	0.3484	0.1449	0.2047
L4	0.7137	0.4614	0.5605	0.3922	0.1847	0.2511
L5	0.7249	0.489	0.5841	0.3447	0.2094	0.2605
L6	0.7873	0.4423	0.5664	0.2924	0.1603	0.2071
L7	0.7674	0.4397	0.5592	0.3276	0.1197	0.1753
L8	0.7037	0.4382	0.5402	0.392	0.1504	0.2174
L9	0.683	0.3533	0.4657	0.5449	0.1049	0.1759
L10	0.6111	0.3439	0.4401	0.6049	0.0499	0.0922
R1	0.5238	0.3768	0.4384	0.3706	0.0535	0.0935
R2	0.5894	0.4656	0.5202	0.3398	0.1608	0.2183
R3	0.6127	0.4769	0.5363	0.2499	0.1324	0.1731
R4	0.7546	0.4123	0.5333	0.2819	0.1242	0.1724
R5	0.7044	0.4148	0.5222	0.2815	0.1562	0.2009
R6	0.6219	0.4855	0.5454	0.2169	0.1851	0.1997
R7	0.634	0.4937	0.5551	0.1774	0.1194	0.1427
R8	0.6079	0.4393	0.51	0.1786	0.0847	0.1149
R9	0.6886	0.3838	0.4929	0.2217	0.047	0.0776
R10	0.6533	0.3886	0.4873	0.5329	0.0241	0.0461

Mean	0.6626	0.4244	0.5151	0.3424	0.1278	0.1747
-------------	--------	--------	--------	--------	--------	--------

Model	Internal Validation Data			External Test Data		
FCN	precision	recall	F1-score	precision	recall	F1-score
L1	0.6954	0.7092	0.7023	0.721	0.5493	0.6236
L2	0.7654	0.7176	0.7408	0.7115	0.6088	0.6563
L3	0.7676	0.7617	0.7646	0.6979	0.6497	0.673
L4	0.7565	0.7453	0.7509	0.7107	0.639	0.673
L5	0.7568	0.7584	0.7576	0.6685	0.6534	0.6609
L6	0.7356	0.7084	0.7218	0.6135	0.6182	0.6158
L7	0.6984	0.7175	0.7079	0.5731	0.607	0.5895
L8	0.6631	0.6984	0.6802	0.5669	0.5695	0.5682
L9	0.6986	0.7014	0.7	0.5831	0.5703	0.5766
L10	0.6782	0.6576	0.6677	0.6103	0.4457	0.5155
R1	0.6764	0.6732	0.6748	0.671	0.5673	0.6147
R2	0.7927	0.7072	0.7475	0.6893	0.6447	0.6662
R3	0.7789	0.7315	0.7544	0.6653	0.6298	0.6471
R4	0.7774	0.724	0.7498	0.6458	0.6388	0.6423
R5	0.7624	0.7051	0.7327	0.6291	0.6245	0.6268
R6	0.7614	0.6859	0.7218	0.6055	0.5966	0.601
R7	0.7427	0.6835	0.7119	0.5854	0.6173	0.6009
R8	0.7397	0.696	0.7172	0.5884	0.6051	0.5966
R9	0.7845	0.7248	0.7535	0.6141	0.5582	0.5847
R10	0.7614	0.6975	0.7281	0.6222	0.4912	0.5494
Mean	0.7397	0.7102	0.7243	0.6386	0.5942	0.6141

Model	Internal Validation Data			External Test Data		
Unet	precision	recall	F1-score	precision	recall	F1-score
L1	0.6877	0.5453	0.6086	0.5893	0.404	0.4786
L2	0.7393	0.5744	0.6469	0.601	0.4285	0.5007
L3	0.7773	0.5357	0.6356	0.5758	0.422	0.4863
L4	0.6496	0.5782	0.612	0.477	0.4726	0.4748
L5	0.6442	0.5855	0.6136	0.4267	0.3695	0.3961
L6	0.6468	0.5359	0.5861	0.3662	0.3254	0.3446
L7	0.5718	0.5344	0.5524	0.3036	0.3087	0.3061
L8	0.5747	0.5444	0.5591	0.3062	0.2908	0.2983
L9	0.5997	0.5281	0.5617	0.3688	0.3179	0.3413
L10	0.565	0.4266	0.4864	0.5011	0.2232	0.3085
R1	0.5964	0.5819	0.5891	0.5508	0.4763	0.5109
R2	0.6493	0.6013	0.6245	0.4805	0.5217	0.5001
R3	0.6313	0.6162	0.6237	0.4441	0.492	0.4668
R4	0.6341	0.5938	0.6133	0.4177	0.4763	0.4451
R5	0.5705	0.5288	0.5488	0.355	0.4441	0.3947
R6	0.5289	0.5235	0.5262	0.3055	0.3397	0.3214
R7	0.5585	0.5363	0.5472	0.3196	0.3032	0.3111
R8	0.5645	0.5244	0.5436	0.3465	0.2925	0.3172
R9	0.5821	0.555	0.5681	0.3846	0.3156	0.3464
R10	0.6171	0.4997	0.5525	0.4262	0.311	0.3592

Mean	0.6194	0.5475	0.58	0.4273	0.3768	0.3954
-------------	--------	--------	------	--------	--------	--------

Model	Internal Validation Data			External Test Data		
Segment	precision	recall	F1-score	precision	Recall	F1-score
L1	0.6798	0.602	0.6387	0.6327	0.3948	0.4863
L2	0.7694	0.5765	0.6586	0.6019	0.4357	0.5054
L3	0.7577	0.6484	0.6988	0.5013	0.5098	0.5055
L4	0.751	0.6837	0.7159	0.4966	0.4737	0.4849
L5	0.81	0.6856	0.7425	0.5022	0.4278	0.4624
L6	0.7794	0.6976	0.7363	0.4359	0.4413	0.4386
L7	0.7597	0.6962	0.7266	0.4056	0.3876	0.3964
L8	0.7378	0.6672	0.7008	0.3884	0.3304	0.3573
L9	0.7459	0.6365	0.6867	0.4439	0.3618	0.3988
L10	0.7247	0.5564	0.6298	0.5239	0.2085	0.2983
R1	0.6877	0.5637	0.6195	0.6246	0.4415	0.5179
R2	0.694	0.6007	0.6437	0.5728	0.5023	0.5353
R3	0.6854	0.6104	0.6458	0.4665	0.4807	0.4735
R4	0.7513	0.6214	0.6799	0.5119	0.4009	0.4498
R5	0.7257	0.6363	0.6781	0.4955	0.4326	0.4618
R6	0.6974	0.6677	0.6822	0.4315	0.445	0.4381
R7	0.7054	0.687	0.6961	0.4028	0.3842	0.3933
R8	0.7098	0.6883	0.6989	0.4096	0.3908	0.4
R9	0.7323	0.6861	0.7085	0.433	0.3282	0.3731
R10	0.7129	0.6648	0.688	0.5436	0.2787	0.368
Mean	0.7309	0.6438	0.6838	0.4912	0.4028	0.4372