



Supplementary Materials for the paper

*Retinal Vessel Segmentation based on Fully Convolutional
Neural Networks*

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List of abbreviations:

Acc – Accuracy.

AUC – Area under the ROC curve.

MCC – Matthews correlation coefficient.

Sen – Sensitivity.

Spec – Specificity.

Table 1 - Image-level results for DRIVE database

Image	Sen	Spec	Acc	AUC	MCC
1	0.879165	0.968076	0.956422	0.986409	0.816832
2	0.848293	0.978392	0.958900	0.987261	0.836836
3	0.762847	0.981555	0.949691	0.978555	0.788990
4	0.793692	0.984156	0.958761	0.978337	0.814988
5	0.746262	0.986031	0.953494	0.975649	0.791107
6	0.731163	0.987021	0.950914	0.975822	0.785746
7	0.754545	0.987141	0.956346	0.978605	0.800041
8	0.736428	0.985686	0.954357	0.977920	0.780624
9	0.725355	0.989523	0.958495	0.977727	0.787035
10	0.794232	0.979773	0.957613	0.978860	0.793861
11	0.808790	0.976750	0.954976	0.978575	0.797623
12	0.829870	0.980042	0.961244	0.985930	0.820816
13	0.774991	0.984425	0.954734	0.979697	0.805862
14	0.850400	0.976388	0.961533	0.985744	0.817311
15	0.840208	0.978943	0.964537	0.984685	0.811343
16	0.803431	0.982663	0.959213	0.986080	0.815205
17	0.757244	0.983998	0.956039	0.982802	0.787119
18	0.857596	0.971911	0.958781	0.986707	0.804275
19	0.911938	0.974213	0.966718	0.990305	0.850616
20	0.872156	0.970304	0.959837	0.986970	0.801529
Average	0.803930	0.980350	0.957630	0.982132	0.805388

Table 2 - Image-level results for STARE database

Image	Sen	Spec	Acc	AUC	MCC
1	0.749277	0.984616	0.958727	0.978728	0.779073
2	0.764687	0.990030	0.969156	0.986414	0.807071
3	0.848127	0.984284	0.973069	0.991206	0.823781
4	0.618812	0.990561	0.952169	0.983366	0.715714
5	0.723102	0.982671	0.950291	0.979113	0.759558
44	0.864852	0.988005	0.977068	0.994379	0.857550
77	0.934807	0.977548	0.972842	0.994982	0.869819
81	0.915981	0.983663	0.976719	0.995150	0.877233
82	0.888098	0.988891	0.977997	0.995226	0.884916
139	0.893774	0.974099	0.965168	0.990420	0.832439
162	0.899923	0.982493	0.974312	0.994151	0.860238
163	0.928466	0.982107	0.976369	0.995721	0.881185
235	0.863165	0.987590	0.972357	0.993644	0.868986
236	0.842725	0.988210	0.969916	0.992678	0.859463
239	0.826686	0.990778	0.971387	0.993546	0.857859
240	0.768646	0.987064	0.956110	0.982173	0.810959
255	0.771998	0.993620	0.966063	0.993153	0.836274
291	0.852669	0.993614	0.983660	0.996362	0.872310
319	0.838423	0.984812	0.976128	0.990317	0.794418
324	0.836073	0.981612	0.968130	0.989651	0.811816
Average	0.831514	0.985813	0.969382	0.990519	0.833033

Table 3 - Image-level results for CHASE_DB1 database

Image	Sen	Spec	Acc	AUC	MCC
01R	0.750989	0.993156	0.966763	0.986760	0.818780
01L	0.828663	0.990718	0.974387	0.992642	0.854018
02R	0.764390	0.986515	0.961615	0.982528	0.798038
02L	0.745952	0.990786	0.962125	0.985061	0.806054
03R	0.786307	0.988889	0.966952	0.987492	0.821321
03L	0.801304	0.987156	0.966106	0.987092	0.825097
04R	0.733452	0.990193	0.961741	0.983259	0.793750
04L	0.760570	0.992236	0.965902	0.988831	0.821405
05R	0.777883	0.990670	0.964565	0.988474	0.827331
05L	0.757027	0.990995	0.964322	0.988701	0.813537
06R	0.782492	0.989236	0.966925	0.986779	0.820327
06L	0.720857	0.993570	0.963940	0.981330	0.801281
07R	0.759145	0.990463	0.965103	0.986293	0.811430
07L	0.759367	0.989853	0.963979	0.988262	0.809490
08R	0.808871	0.973761	0.957697	0.979866	0.765207
08L	0.801075	0.977711	0.960254	0.981609	0.777291
09R	0.700408	0.993133	0.971718	0.983405	0.775104
09L	0.751523	0.989995	0.972677	0.986503	0.787072
10R	0.818472	0.974006	0.960044	0.979189	0.764945
10L	0.810821	0.981297	0.965479	0.985191	0.794372
11R	0.830739	0.986142	0.974167	0.990064	0.818108
11L	0.854143	0.984426	0.974405	0.990909	0.823288
12R	0.826278	0.979168	0.962883	0.986705	0.805084
12L	0.806530	0.974887	0.957440	0.980788	0.773365
13R	0.710529	0.985488	0.959718	0.981577	0.748803
13L	0.771759	0.983360	0.963918	0.984341	0.777909
14R	0.778138	0.984928	0.967564	0.982883	0.783914
14L	0.784339	0.987131	0.966914	0.988687	0.808510
Average	0.777929	0.986424	0.965332	0.985544	0.800887