

Normal_cor_simulation

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1 Motivation

2 Simulation result

2.1 Setup

2.1.1 Averaged estimation

Table 1: correlation-0.1-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
3.273011	3.2917501	3.5821454	6.269756	8.9266748	6.3453264
0.000000	0.5443885	0.5044931	0.000000	1.9384712	0.9316854
3.796410	3.1264892	3.7124981	4.785749	3.1161925	4.7414871
0.000000	0.5343199	0.5359537	0.000000	0.7696360	0.9454778
2.562346	1.7143087	2.3482984	5.601250	4.2969854	5.6991445
0.000000	0.3453015	0.4253327	0.000000	0.9588671	1.0082503

Table 2: correlation-0.2-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
3.287854	2.5921070	3.1436565	6.770908	11.2012351	6.7164432
0.000000	0.6156821	0.5132497	0.000000	2.3052595	1.0607838
3.451079	1.9155244	3.1663861	4.501921	1.6658913	4.4551279
0.000000	0.4702985	0.4613175	0.000000	0.4234275	0.9870434
2.277031	1.1033043	1.9360422	4.852822	1.4949975	4.2776881
0.000000	0.3723105	0.3711155	0.000000	0.4598318	0.9419064

Table 3: correlation-0.3-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
3.191655	2.0751094	3.1778233	7.531216	12.0263149	7.1408985
0.000000	0.5307726	0.5135604	0.000000	1.9506731	1.1291242
3.339649	1.7675255	3.3043715	4.050892	0.5155483	3.5605773
0.000000	0.4893117	0.4962328	0.000000	0.2001673	0.8826682
2.038114	0.9754073	2.0122458	4.783040	0.8566086	4.5923752
0.000000	0.4133394	0.4072330	0.000000	0.2153063	0.8332746

Table 4: correlation-0.4-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
3.083154	2.3328907	3.1190410	7.894065	12.7649792	7.1558509
0.000000	0.5965657	0.5654936	0.000000	1.7175563	0.9890324
3.151569	1.9214769	3.2288690	3.468205	0.4418272	2.5874831
0.000000	0.4450802	0.4358622	0.000000	0.1617832	0.7005672
1.774852	0.5980890	1.5768253	3.977908	0.5104431	2.7801760
0.000000	0.2518925	0.3319370	0.000000	0.2231496	0.7683978

Table 5: correlation-0.5-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
2.893748	2.3024869	2.4028098	7.691212	10.7845926	6.5634685
0.000000	0.4784659	0.4045158	0.000000	1.4360667	1.0715056
2.871685	1.3541603	2.4856693	2.945046	0.1016010	1.8439252
0.000000	0.4032703	0.4648654	0.000000	0.0768577	0.7091286
1.614075	0.4694316	1.3682154	3.056443	0.3351225	2.1218839
0.000000	0.2108956	0.2900643	0.000000	0.2204598	0.7663524

Table 6: correlation-0.6-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
2.862072	2.4174144	2.6436607	8.039859	11.0860764	8.6552185
0.000000	0.5401346	0.5119302	0.000000	1.2308141	1.1244137
2.599112	1.6483702	2.8042186	2.438889	0.1140950	1.5863575
0.000000	0.4224303	0.3902903	0.000000	0.1066162	0.6650055
1.373710	0.3102861	1.3018094	2.707392	0.1738568	1.8306026
0.000000	0.1687992	0.3355386	0.000000	0.1347137	0.6639718

Table 7: correlation-0.7-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
2.762765	2.5981790	2.5301655	8.381747	11.9652031	10.7651609
0.000000	0.5237298	0.4600912	0.000000	1.2560767	1.3741490
2.203353	1.3538424	2.2054306	1.692767	0.0442788	0.6312460
0.000000	0.3606873	0.4077517	0.000000	0.0651771	0.5678627
1.151067	0.4668372	1.0171875	1.811800	0.1635264	0.9408967
0.000000	0.1932195	0.2996236	0.000000	0.1631234	0.5278105

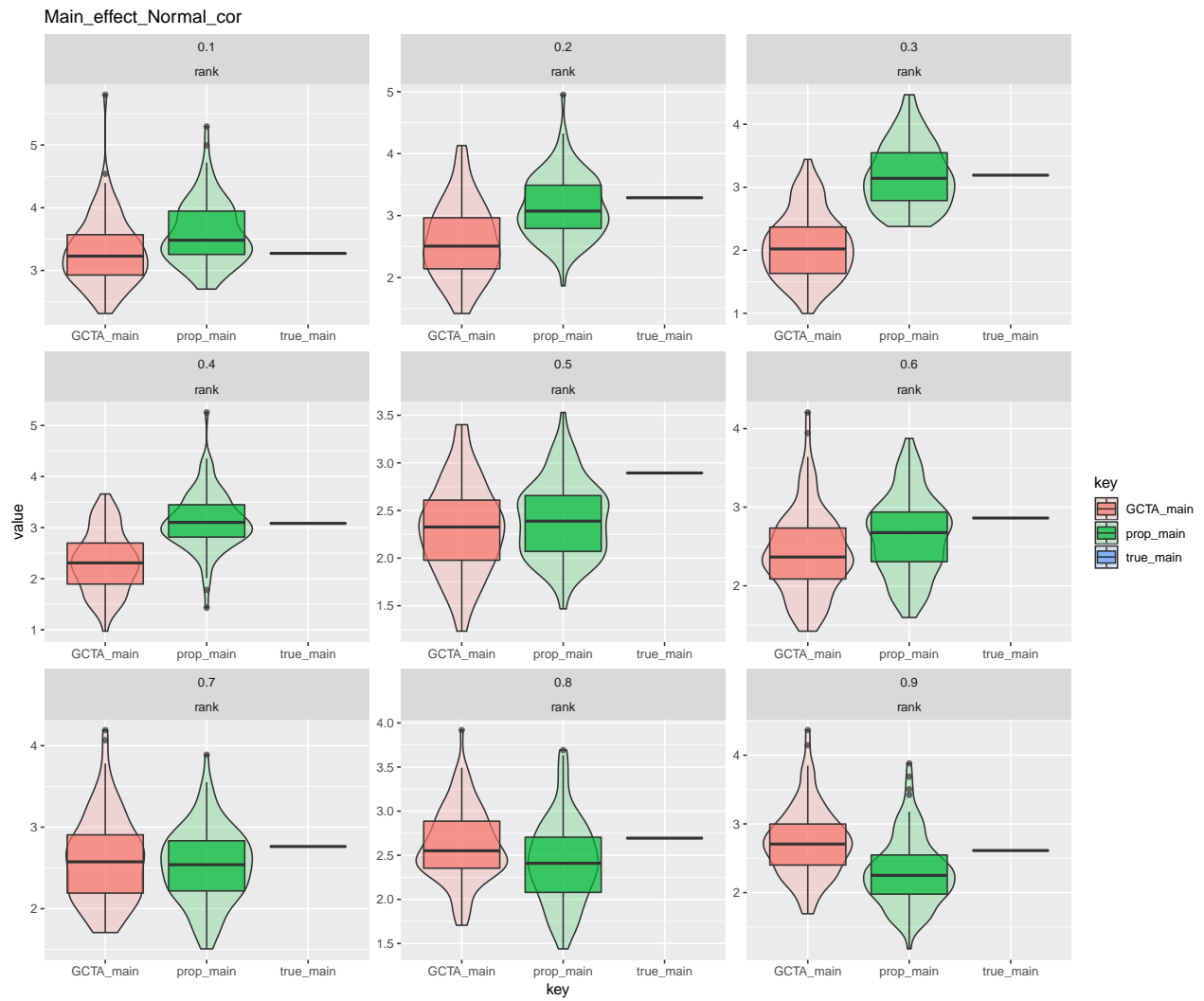
Table 8: correlation-0.8-rank

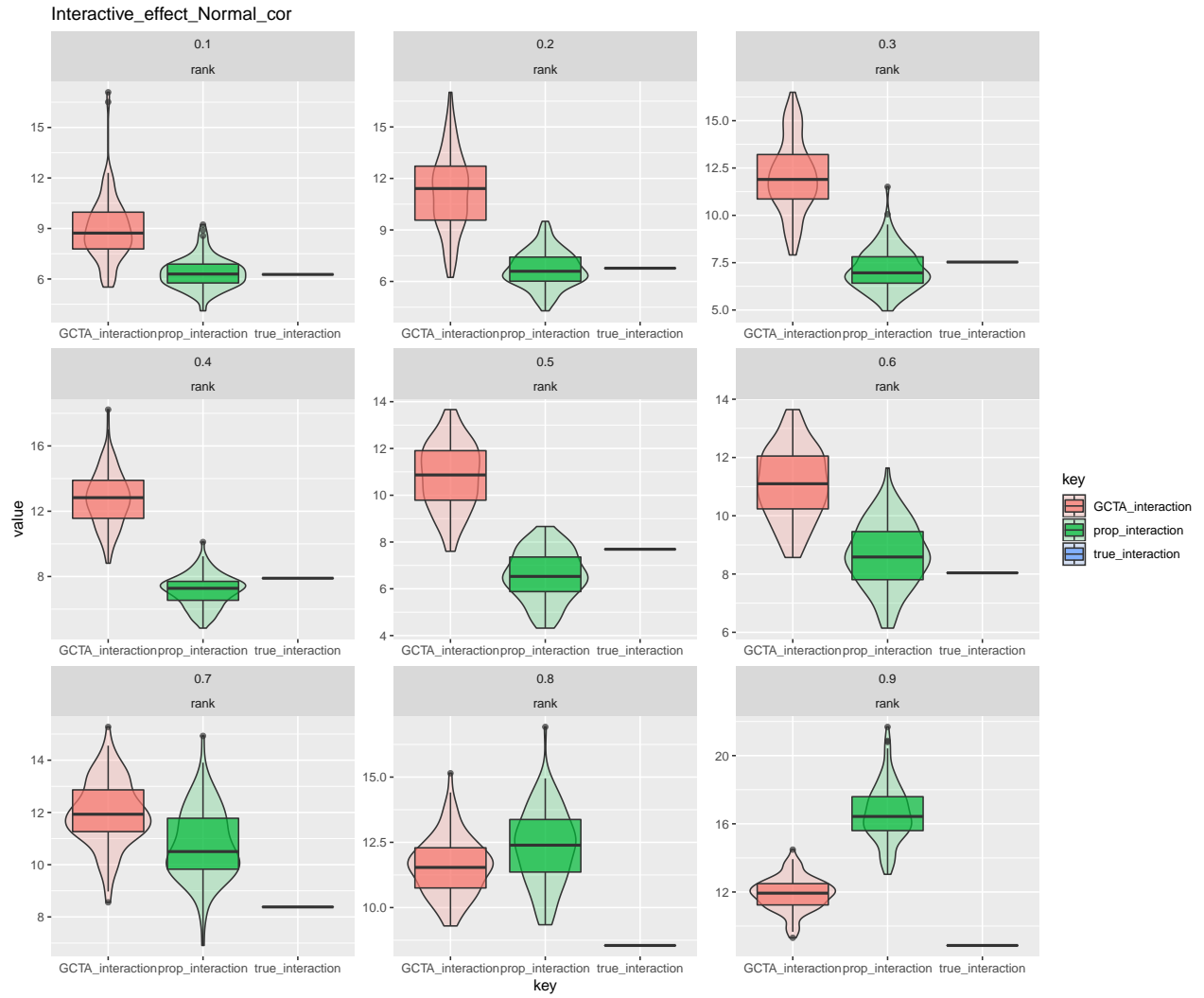
Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
2.6938022	2.6075374	2.4276241	8.548136	11.5919954	12.3174931
0.000000	0.4111341	0.4786533	0.000000	1.1345748	1.4616026
1.9258045	1.3098241	1.9241811	1.128533	0.0541264	0.0042766
0.000000	0.3305982	0.3399465	0.000000	0.0762302	0.4628433
0.8749072	0.4420723	0.9004700	1.302277	0.0870159	0.4794344
0.000000	0.1892886	0.2690165	0.000000	0.0929880	0.4242552

Table 9: correlation-0.9-rank

Main			Interaction		
true_main	GCTA_main	prop_main	true_interaction	GCTA_interaction	prop_interaction
2.6124061	2.7289938	2.2996102	8.8643704	11.8996553	16.6313905
0.000000	0.5120883	0.5066546	0.000000	0.9770764	1.7281144
1.6765453	1.3756480	1.7078619	0.5539569	0.0316277	-0.1769137
0.000000	0.3294642	0.3581214	0.000000	0.0546656	0.4286480
0.6315223	0.3686161	0.6189097	0.6257508	0.0816362	0.1575732
0.000000	0.1721345	0.2338492	0.000000	0.0822467	0.4140326

2.1.2 Histogram of 100 iterations





3 Conclusion

4 Further work