

Output tables for 1xN statistical comparisons.

January 10, 2022

1 Average rankings of Friedman test

Average ranks obtained by each method in the Friedman test.

Friedman statistic (distributed according to chi-square with 12 degrees of freedom): 135.063398.

P-value computed by Friedman Test: 0.

Algorithm	Ranking
best-precision	3.6538
best-recall	7.9808
balanced	6.0385
promethee-precision	3.6538
promethee-recall	7.9808
bac	7.9038
precision	3.6346
recall	12.3654
f1	7.8654
auc	8.3654
gmean	8.8269
AdaBoost	8.0769
Bagging	4.6538

Table 1: Average Rankings of the algorithms (Friedman)

2 Post hoc comparison (Friedman)

P-values obtained in by applying post hoc methods over the results of Friedman procedure.

i	algorithm	$z = (R_0 - R_i)/SE$	p
12	recall	8.083122	0
11	gmean	4.807143	0.000002
10	auc	4.379841	0.000012
9	AdaBoost	4.112778	0.000039
8	best-recall	4.023757	0.000057
7	promethee-recall	4.023757	0.000057
6	bac	3.95254	0.000077
5	f1	3.916931	0.00009
4	balanced	2.225529	0.026046
3	Bagging	0.943624	0.345362
2	best-precision	0.017804	0.985795
1	promethee-precision	0.017804	0.985795

Table 2: Post Hoc comparison Table for $\alpha = 0.05$ (FRIEDMAN)

3 Adjusted P-Values (Friedman)

Adjusted P-values obtained through the application of the post hoc methods (Friedman).

i	algorithm	unadjusted p
1	recall	0
2	gmean	0.000002
3	auc	0.000012
4	AdaBoost	0.000039
5	best-recall	0.000057
6	promethee-recall	0.000057
7	bac	0.000077
8	f1	0.00009
9	balanced	0.026046
10	Bagging	0.345362
11	best-precision	0.985795
12	promethee-precision	0.985795

Table 3: Adjusted p -values (FRIEDMAN) (1)

i	algorithm	unadjusted p
1	recall	0
2	gmean	0.000002
3	auc	0.000012
4	AdaBoost	0.000039
5	best-recall	0.000057
6	promethee-recall	0.000057
7	bac	0.000077
8	f1	0.00009
9	balanced	0.026046
10	Bagging	0.345362
11	best-precision	0.985795
12	promethee-precision	0.985795

Table 4: Adjusted p -values (FRIEDMAN) (II)