

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): 152.480135.

P-value computed by Friedman Test: 0.

Algorithm	Ranking
best-precision	10.4231
best-recall	4.0385
balanced	5.9038
promethee-precision	10.4231
promethee-recall	4.0385
bac	6.7692
precision	11.2692
recall	1.8654
f1	7.0769
auc	7.3654
gmean	6.2885
AdaBoost	8.1538
Bagging	7.3846

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	precision	8.70627	0
11	best-precision	7.922884	0
10	promethee-precision	7.922884	0
9	AdaBoost	5.821984	0
8	Bagging	5.109815	0
7	auc	5.092011	0
6	f1	4.824947	0.000001
5	bac	4.540079	0.000006
4	gmean	4.094974	0.000042
3	balanced	3.738889	0.000185
2	best-recall	2.011878	0.04233
1	promethee-recall	2.011878	0.04233

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	precision	0
2	best-precision	0
3	promethee-precision	0
4	AdaBoost	0
5	Bagging	0
6	auc	0
7	f1	0.000001
8	bac	0.000006
9	gmean	0.000042
10	balanced	0.000185
11	best-recall	0.044233
12	promethee-recall	0.044233

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

i	algorithm	unadjusted p
1	precision	0
2	best-precision	0
3	promethee-precision	0
4	AdaBoost	0
5	Bagging	0
6	auc	0
7	f1	0.000001
8	bac	0.000006
9	gmean	0.000042
10	balanced	0.000185
11	best-recall	0.04233
12	promethee-recall	0.04233

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