

# Output tables for the test of Multiple comparisons.

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## 1 Average rankings of Friedman test

Average ranks obtained by applying the Friedman procedure

Algorithm	Ranking
brm	2.1316
gmm	1.8947
isorf	3.1105
ocsvm	2.8632

Table 1: Average Rankings of the algorithms

Friedman statistic considering reduction performance (distributed according to chi-square with 3 degrees of freedom: 57.382105.  
P-value computed by Friedman Test: 3.583522367733849E-11.

## 2 Post hoc comparisons

Results achieved on post hoc comparisons for  $\alpha = 0.05$ ,  $\alpha = 0.10$  and adjusted p-values.

### 2.1 P-values for $\alpha = 0.05$

$i$	algorithms	$z = (R_0 - R_i)/SE$	$p$	Holm
6	gmm vs. isorf	6.49054	0	0.008333
5	brm vs. isorf	5.226149	0	0.01
4	gmm vs. ocsvm	5.169954	0	0.0125
3	brm vs. ocsvm	3.905563	0.000094	0.016667
2	isorf vs. ocsvm	1.320586	0.186639	0.025
1	brm vs. gmm	1.264391	0.20609	0.05

Table 2: P-values Table for  $\alpha = 0.05$

Holm's procedure rejects those hypotheses that have an unadjusted p-value  $\leq 0.025$ .

## 2.2 P-values for $\alpha = 0.10$

$i$	algorithms	$z = (R_0 - R_i)/SE$	$p$	Holm
6	gmm vs. isorf	6.49054	0	0.016667
5	brm vs. isorf	5.226149	0	0.02
4	gmm vs. ocsvm	5.169954	0	0.025
3	brm vs. ocsvm	3.905563	0.000094	0.033333
2	isorf vs. ocsvm	1.320586	0.186639	0.05
1	brm vs. gmm	1.264391	0.20609	0.1

Table 3: P-values Table for  $\alpha = 0.10$

Holm's procedure rejects those hypotheses that have an unadjusted p-value  $\leq 0.05$ .

## 2.3 Adjusted p-values

i	hypothesis	unadjusted $p$	$p_{Holm}$
1	gmm vs .isorf	0	0
2	brm vs .isorf	0	0.000001
3	gmm vs .ocsvm	0	0.000001
4	brm vs .ocsvm	0.000094	0.000282
5	isorf vs .ocsvm	0.186639	0.373279
6	brm vs .gmm	0.20609	0.373279

Table 4: Adjusted  $p$ -values