

data/EDGAR.csv

June 10, 2011

1 Tables of Friedman, Aligned Friedman, Bonferroni-Dunn, Holm, Hochberg and Hommel Tests

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Table 1: Average Rankings of the algorithms (Friedman)

Algorithm	Ranking
CADD _G M _t st	4.761904761904761
CAIM _G M _t st	3.666666666666667
Chi2Merge _G M _t st	3.4166666666666674
ChiMerge _G M _t st	3.1785714285714284
Fayyad _G M _t st	2.7619047619047605
ID3 _G M _t st	5.595238095238096
USD _G M _t st	4.619047619047619

Friedman statistic (distributed according to chi-square with 6 degrees of freedom: 55.5076530612244. P-value computed by Friedman Test: 3.9913006233405213E-10.

Iman and Davenport statistic (distributed according to F-distribution with 6 and 246 degrees of freedom: 11.582200584225879. P-value computed by Iman and Davenport Test: 2.0381282521712514E-11.

Table 2: Average Rankings of the algorithms (Aligned Friedman)

Algorithm	Ranking
$CADD_G M_{tst}$	180.71428571428567
$CAIM_G M_{tst}$	129.8095238095238
$Chi2Merge_G M_{tst}$	120.08333333333331
$ChiMerge_G M_{tst}$	112.75
$Fayyad_G M_{tst}$	97.2857142857143
$ID3_G M_{tst}$	214.09523809523805
$USD_G M_{tst}$	177.76190476190482

Aligned Friedman statistic (distributed according to chi-square with 6 degrees of freedom): 37.06387593150836. P-value computed by Aligned Friedman Test: 1.7111651949841544E-6.

Table 3: Average Rankings of the algorithms (Quade)

Algorithm	Ranking
$CADD_G M_{tst}$	4.941306755260244
$CAIM_G M_{tst}$	3.578073089700997
$Chi2Merge_G M_{tst}$	3.319490586932447
$ChiMerge_G M_{tst}$	3.255260243632337
$Fayyad_G M_{tst}$	2.4429678848283505
$ID3_G M_{tst}$	5.550387596899225
$USD_G M_{tst}$	4.912513842746401

Quade statistic (distributed according to F-distribution with 6 and 246 degrees of freedom: 10.887531075417167. P-value computed by Quade Test: 9.52918745918556E-11.

Table 4: Contrast Estimation

	CADD G_{Mfst}	CAIM G_{Mfst}	Chi2Merge G_{Mfst}	ChiMerge G_{Mfst}	Fayyad G_{Mfst}	ID3 G_{Mfst}	USD G_{Mfst}
CADD G_{Mfst}	0.00000000	-0.07037143	-0.07619429	-0.08682714	-0.09873429	0.00510143	-0.02896929
CAIM G_{Mfst}	0.07037143	0.00000000	-0.00582286	-0.01645571	-0.02836286	0.07547286	0.04140214
Chi2Merge G_{Mfst}	0.07619429	0.00582286	0.00000000	-0.01063286	-0.02254000	0.08129571	0.04722500
ChiMerge G_{Mfst}	0.08682714	0.01645571	0.01063286	0.00000000	-0.01190714	0.09192857	0.05785786
Fayyad G_{Mfst}	0.09873429	0.02836286	0.02254000	0.01190714	0.00000000	0.10383371	0.06976500
ID3 G_{Mfst}	-0.00510143	-0.07547286	-0.08129571	-0.09192857	-0.10383371	0.00000000	-0.03407071
USD G_{Mfst}	0.02896929	-0.04140214	-0.04722500	-0.05785786	-0.06976500	0.03407071	0.00000000

Table 5: Holm / Hochberg / Holland / Rom / Finner / Li Table for $\alpha = 0.05$ (FRIEDMAN)

i	algorithm	$z = (R_0 - R_i)/SE$	p	Holm/Hochberg/Hommel	Holland	Rom	Finner	Li
6	ID _{3G} $M_t.st$	6.010407640085658	1.8505741383967846E-9	0.008333333333333333	0.008512444610847103	0.008764162596519848	0.008512444610847103	0.032802151694127
5	CADD _G $M_t.st$	4.2426406871192865	2.2090496998611892E-5	0.01	0.010206218313011495	0.010515350115740741	0.016952427508441503	0.032802151694127
4	USD _G $M_t.st$	3.939594923753624	8.161930359702606E-5	0.0125	0.012741455098566168	0.013109375000000001	0.025320565519103666	0.032802151694127
3	CAIM _G $M_t.st$	1.919289834649204	0.05494766378708697	0.016666666666666666	0.016952427508441503	0.016666666666666666	0.03361747021845407	0.032802151694127
2	Chi2Merge _G $M_t.st$	1.3889597487592942	0.1648449901418429	0.025	0.025320565519103666	0.025	0.04184374797610979	0.032802151694127
1	ChiMerge _G $M_t.st$	0.8838834764831869	0.3767591178115807	0.05	0.0500000000000000044	0.05	0.0500000000000000044	0.05

Bonferroni-Dunn's procedure rejects those hypotheses that have a p-value $\leq 0.008333333333333333$.

Holm's procedure rejects those hypotheses that have a p-value $\leq 0.016666666666666666$.

Hochberg's procedure rejects those hypotheses that have a p-value ≤ 0.0125 .

Hommel's procedure rejects those hypotheses that have a p-value $\leq 0.016666666666666666$.

Holland's procedure rejects those hypotheses that have a p-value $\leq 0.016952427508441503$.

Rom's procedure rejects those hypotheses that have a p-value $\leq 0.013109375000000001$.

Finner's procedure rejects those hypotheses that have a p-value ≤ 0.03361747021845407 .

Li's procedure rejects those hypotheses that have a p-value $\leq 0.032802151694127334$.

Table 6: Holm / Hochberg / Holland / Rom / Finner / Li Table for $\alpha = 0.05$ (ALIGNED FRIEDMAN)

i	algorithm	$z = (R_0 - R_i)/SE$	p	Holm/Hochberg/Hommel	Holland	Rom	Finner	Li
6	ID _{3G} $M_t.st$	6.296422333074459	3.0459378498197484E-10	0.008333333333333333	0.008512444610847103	0.008764162596519848	0.008512444610847103	0.03134106983693
5	CADD _G $M_t.st$	4.497077834303486	6.889377283186706E-6	0.01	0.010206218313011495	0.010515350115740741	0.016952427508441503	0.03134106983693
4	USD _G $M_t.st$	4.337934668934303	1.438278908187241E-5	0.0125	0.012741459098566168	0.013109375000000001	0.025320565519103666	0.03134106983693
3	CAlM _G $M_t.st$	1.7531416443089498	0.07957769680736351	0.016666666666666666	0.016952427508441503	0.016666666666666666	0.03361747021845407	0.03134106983693
2	Chi2Merge _G $M_t.st$	1.2288675874275927	0.21912145570751265	0.025	0.025320565519103666	0.025	0.04184374797610979	0.03134106983693
1	ChiMerge _G $M_t.st$	0.8335764992523151	0.40451967309831555	0.05	0.0500000000000000044	0.05	0.0500000000000000044	0.05

Bonferroni-Dunn's procedure rejects those hypotheses that have a p-value $\leq 0.008333333333333333$.

Holm's procedure rejects those hypotheses that have a p-value $\leq 0.016666666666666666$.

Hochberg's procedure rejects those hypotheses that have a p-value ≤ 0.0125 .

Hommel's procedure rejects those hypotheses that have a p-value $\leq 0.016666666666666666$.

Holland's procedure rejects those hypotheses that have a p-value $\leq 0.016952427508441503$.

Rom's procedure rejects those hypotheses that have a p-value $\leq 0.013109375000000001$.

Finner's procedure rejects those hypotheses that have a p-value ≤ 0.03361747021845407 .

Li's procedure rejects those hypotheses that have a p-value ≤ 0.03134106983693076 .

Table 7: Holm / Hochberg / Holland / Rom / Finner / Li Table for $\alpha = 0.05$ (QUADE)

i	algorithm	$z = (R_0 - R_i)/SE$	p	Holm/Hochberg/Hommel	Holland	Rom	Finner	Li
6	ID _{3G} $M_t.st$	3.315247378896877	9.15620575072444E-4	0.008333333333333333	0.008512444610847103	0.008764162596519848	0.008512444610847103	0.032307863326380
5	CADD _G $M_t.st$	2.6654305369890783	0.0076889814474581045	0.01	0.010206218313011495	0.010515350115740741	0.016952427508441503	0.032307863326380
4	USD _G $M_t.st$	2.6347119226443465	0.008420871828876075	0.0125	0.012741455098566168	0.013109375000000001	0.025320565519103666	0.032307863326380
3	CAIM _G $M_t.st$	1.2110222962827153	0.22588685962867586	0.016666666666666666	0.016952427508441503	0.016666666666666666	0.03361747021845407	0.032307863326380
2	Chi2Merge _G $M_t.st$	0.9351455097636764	0.349713315685138	0.025	0.025320565519103666	0.025	0.04184374797610979	0.032307863326380
1	ChiMerge _G $M_t.st$	0.8666193700715817	0.3861505967987614	0.05	0.050000000000000044	0.05	0.050000000000000044	0.05

Bonferroni-Dunn's procedure rejects those hypotheses that have a p-value $\leq 0.008333333333333333$.

Holm's procedure rejects those hypotheses that have a p-value $\leq 0.016666666666666666$.

Hochberg's procedure rejects those hypotheses that have a p-value ≤ 0.0125 .

Hommel's procedure rejects those hypotheses that have a p-value $\leq 0.016666666666666666$.

Holland's procedure rejects those hypotheses that have a p-value $\leq 0.016952427508441503$.

Rom's procedure rejects those hypotheses that have a p-value $\leq 0.013109375000000001$.

Finner's procedure rejects those hypotheses that have a p-value ≤ 0.03361747021845407 .

Li's procedure rejects those hypotheses that have a p-value $\leq 0.032307863326380984$.

Table 8: Adjusted p -values (FRIEDMAN)

i	algorithm	unadjusted p	p_{Bonf}	p_{Holm}	p_{Hoch}	p_{Homn}
1	ID $3_G M_t st$	1.8505741383967846E-9	1.1103444830380707E-8	1.1103444830380707E-8	1.1103444830380707E-8	1.1103444830380707E-8
2	CADD $G M_t st$	2.2090496998611892E-5	1.3254298199167136E-4	1.1045248499305946E-4	1.1045248499305946E-4	1.1045248499305946E-4
3	USD $G M_t st$	8.161930359702606E-5	4.897158215821564E-4	3.2647721438810426E-4	3.2647721438810426E-4	3.2647721438810426E-4
4	CAIM $G M_t st$	0.05494766378708697	0.3296859827225218	0.1648429913612609	0.1648429913612609	0.1648429913612609
5	Chi2Merge $G M_t st$	0.1648449901418429	0.9890699408510574	0.3296899802836858	0.3296899802836858	0.3296899802836858
6	ChiMerge $G M_t st$	0.3767591178115807	2.2605547068694842	0.3767591178115807	0.3767591178115807	0.3767591178115807

Table 9: Adjusted p -values (FRIEDMAN)

i	algorithm	unadjusted p	p_{Holt}	p_{Rom}	p_{Finn}	p_{Li}
1	ID $3_G M_t st$	1.8505741383967846E-9	1.1103444830240505E-8	1.0557620982132549E-8	1.1103444830240505E-8	2.9692759024470586E-9
2	CADD $G M_t st$	2.2090496998611892E-5	1.1044760520040331E-4	1.0503928426284146E-4	6.6270027036651907E-5	3.5443300768264514E-5
3	USD $G M_t st$	8.161930359702606E-5	3.264372462987719E-4	3.113012771281089E-4	1.632319454833997E-4	1.3094233466890407E-4
4	CAIM $G M_t st$	0.05494766378708697	0.15595115459495712	0.1648429913612609	0.0812786900234419	0.08102122059294038
5	Chi2Merge $G M_t st$	0.1648449901418429	0.3025161095088216	0.3296899802836858	0.19439804995922938	0.20917135546970128
6	ChiMerge $G M_t st$	0.3767591178115807	0.3767591178115808	0.3767591178115808	0.3767591178115808	0.3767591178115807

Table 10: Adjusted p -values (ALIGNED FRIEDMAN)

i	algorithm	unadjusted p	p_{Bonf}	p_{Holm}	p_{ocb}	p_{omni}
1	ID $_G M_i st$	3.0459378498197484E-10	1.8275627098918492E-9	1.8275627098918492E-9	1.8275627098918492E-9	1.8275627098918492E-9
2	CADD $_G M_i st$	6.889377283186706E-6	4.133626369912024E-5	3.444688641593353E-5	3.444688641593353E-5	3.444688641593353E-5
3	USD $_G M_i st$	1.438278908187241E-5	8.629673449123446E-5	5.753115632748964E-5	5.753115632748964E-5	5.753115632748964E-5
4	C AIM $_G M_i st$	0.07957769680736351	0.4774661808441811	0.23873309042209054	0.23873309042209054	0.23873309042209054
5	Chi2Merge $_G M_i st$	0.21912145570751265	1.314728734245076	0.4382429114150253	0.40451967309831555	0.40451967309831555
6	ChiMerge $_G M_i st$	0.40451967309831555	2.427118038589893	0.4382429114150253	0.40451967309831555	0.40451967309831555

Table 11: Adjusted p -values (ALIGNED FRIEDMAN)

i	algorithm	unadjusted p	p_{Hall}	p_{Rom}	p_{Finn}	p_{Li}
1	ID $_G M_i st$	3.0459378498197484E-10	1.8275627677866169E-9	1.7377232657854024E-9	1.8275627677866169E-9	5.115094001694227E-10
2	CADD $_G M_i st$	6.889377283186706E-6	3.444641178418362E-5	3.275866807741281E-5	2.0667989459433045E-5	1.1569311808633762E-5
3	USD $_G M_i st$	1.438278908187241E-5	5.752991151510735E-5	5.485688326816652E-5	2.8765371299033227E-5	2.4152673143546866E-5
4	C AIM $_G M_i st$	0.07957769680736351	0.22023919543958104	0.23873309042209054	0.11695934150209197	0.117882750833966643
5	Chi2Merge $_G M_i st$	0.21912145570751265	0.3902286990636459	0.40451967309831555	0.25680943388628485	0.26899211416608887
6	ChiMerge $_G M_i st$	0.40451967309831555	0.4045196730983156	0.40451967309831555	0.4045196730983156	0.40451967309831555

Table 12: Adjusted p -values (QUADE)

i	algorithm	unadjusted p	p_{Bonf}	p_{Holm}	p_{Hoch}	p_{Hommel}
1	ID3 $_G M_t st$	9.15620575072444E-4	0.005493723450434664	0.005493723450434664	0.005493723450434664	0.005493723450434664
2	CADD $_G M_t st$	0.0076889814474581045	0.04613388868474863	0.03844490723729052	0.0336834873155043	0.030755925789832418
3	USD $_G M_t st$	0.008420871828876075	0.05052523097325645	0.03844490723729052	0.0336834873155043	0.0336834873155043
4	CAIM $_G M_t st$	0.22588685962867586	1.3553211577720552	0.6776605788860276	0.3861505967987614	0.3861505967987614
5	Chi2Merge $_G M_t st$	0.349713315685138	2.0982798941108283	0.699426631370276	0.3861505967987614	0.3861505967987614
6	ChiMerge $_G M_t st$	0.3861505967987614	2.3169035807925686	0.699426631370276	0.3861505967987614	0.3861505967987614

Table 13: Adjusted p -values (QUADE)

i	algorithm	unadjusted p	p_{Hol}	p_{Rom}	p_{Finn}	p_{Li}
1	ID3 $_G M_t st$	9.15620575072444E-4	0.005481163376745646	0.005223662643114511	0.005481163376745646	0.0014893829994557441
2	CADD $_G M_t st$	0.0076889814474581045	0.03785823119037468	0.032117747142316376	0.022890037611209557	0.01237088752258485
3	USD $_G M_t st$	0.008420871828876075	0.03785823119037468	0.032117747142316376	0.022890037611209557	0.01353249892656137
4	CAIM $_G M_t st$	0.22588685962867586	0.5361118072319508	0.3861505967987614	0.3189066196415875	0.268997385997642
5	Chi2Merge $_G M_t st$	0.349713315685138	0.577127228202783	0.3861505967987614	0.4033414979610439	0.362937781662323
6	ChiMerge $_G M_t st$	0.3861505967987614	0.577127228202783	0.3861505967987614	0.4033414979610439	0.3861505967987614