1 Measures 2 Algorithms 3 Average Ranks

Critical value for Nemenyi test ($\alpha = 0.05$) and 33 sets: 0.576979199548027 Critical value for Dunn test ($\alpha = 0.05$) and 33 sets: 0.64100054283814

x
1 Hamming.Loss
2 Zero.One.Loss 3 Tversky.LossA0.5B0.5 4 Ranking.Loss 5 MacroPrecisionM

6 MacroRecallM

 $7 \quad Macro_Tversky_A0.5_B0.5$ 8 MicroTversky_A0.5B_0.5

x
1 PairWise
2 PairWise-FCMK-N
3 PairWise-FCMK-W

MicroTversky_A0.5B_0.5 2.424 1.909 1.667

Table 1: Average ranks

4 Group Test

Test Function: function (y, ...) Test Function: UseMethod("friedman.test")

 GroupTest – pValue

 Hamming.Loss
 0.000005

 Zero.One.Loss
 0.000000

 Tversky.LossA0.5B0.5
 0.002183

 Ranking.Loss
 0.490803

 MacroPrecisionM
 0.000723

 MacroRecallM
 0.000002

 Macro_Tversky_A0.5_B0.5
 0.005236

 MicroTversky_A0.5B_0.5
 0.006564

Table 2: Group test p-value

5 Pairwise Tests

Correction method: holm
Test Function: function (x, ...)
Test Function: UseMethod("wilcox.test")

Table 5: Pairwise test for Tversky.LossA0.5B0.5

ಬ

 Rank
 2.545
 1.818
 1.636

 1
 0.000
 0.000

 2
 0.073

Table 7: Pairwise test for MacroPrecisionM

 Rank
 1.303
 2.409
 2.288

 1
 0.000
 0.000

 2
 0.828

 3

Table 8: Pairwise test for MacroRecallM

 Rank
 2.455
 1.879
 1.667

 1
 0.009
 0.005

 2
 0.025

Table 9: Pairwise test for Macro Tversky A0.5 B0.5

 Rank
 2.424
 1.909
 1.667

 1
 0.005
 0.001

 2
 0.026

 3

Table 10: Pairwise test for MicroTversky A0.5B $0.5\,$

6 Alg Vs test

Correction method: holm
Test Function: function (x, ...)
Test Function: UseMethod("wilcox.test")
Algorithms: 1 vs rest

υτ

 1
 2
 3

 Rank
 1.303
 2.409
 2.288

2
3
Table 16: Pairwise test for MacroRecallM

7 Given pairs Correction method: holm Test Function: function (x, ...) Test Function: UseMethod("wilcox.test")

 8 Raw Means

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 0.887 0.480 0.144Caenorhabditis_elegans 0.831 0.283Drosophila_melanogaster 0.845 0.5180.518eclipse-churn 0.888 0.5140.480eclipse-ent 0.945 0.5390.454emotions 0.287 0.243 0.2410.7030.703enron 0.590equinox-churn 0.915 0.9150.915equinox-ent 0.915 0.9150.915flags 0.444 0.330 0.333genbase 0.911 Geobacter-sulfurreducens 0.518 $0.410 \\ 0.272$ 0.4100.274Haloarcula_marismortui 0.602 0.7600.760Human3160 0.506 0.2250.224lucene-churn 0.981 0.9810.981lucene-ent 0.9810.9810.981 $\text{mimlImg} \qquad 0.360$ 0.2370.2380.683 0.397 0.883 0.867 mylyn-churn 0.743 0.529mylyn-ent 0.780 0.364pde-churn 0.796 $0.728 \\ 0.722$ pde-ent 0.791 Plant978 0.431 0.2800.281pyrococcus_furiosus 0.776 0.5900.586Saccharomyces_cerevisiae 0.830 0.6600.6600.093 0.103 0.615scene 0.3240.093 $\begin{array}{ll} \text{simpleHC} & 0.390 \\ \text{simpleHS} & 0.645 \end{array}$ 0.1030.615SLASHDOT-F 0.886 0.2640.2640.128 0.158 0.180 0.315 stackex_chemistry 0.419 0.128stackex_chess 0.399 tmc2007-500_sub_0 0.404 0.1580.180 0.314 yeast 0.432 Table 27: Mean value for: Hamming.Loss

PairWise PairWise-FCMK-N PairWise-FCMK-W 1.000 0.993 0.990 | Pairwise | Pairwise-Poiris-iv | Pairwise-Poiris-i 0.9720.820 $0.989 \\ 0.977$ emotions 0.888
enron 1.000
equinox-churn 1.000
flags 0.995
genbase 1.000
Geobacter-sulfurreducens 0.992
Haloarcula_marismortui 1.000
Human3160 1.000
lucene-churn 1.000
nimlImg 0.983
mylyn-churn 0.999
mylyn-ent 0.999
pde-churn 1.000
pde-ent 1.000
placent 1.000
pse-ent 1.000
Saccharomyces_cerevisiae 1.000
simpleHC 1.000
Stackex_chemistry 1.000
stackex_chemistry 1.000 0.943 1.000 0.952 1.000 0.988 1.000 1.000 0.729 0.993 0.976 0.997 1.000 1.000 1.000 0.381 0.638 1.000 0.996

Table 28: Mean value for: Zero.One.Loss

0.9540.966

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 0.831 0.851 birds 0.8510.7990.801Caenorhabditis_elegans 0.830 0.7280.728Drosophila_melanogaster 0.829 0.8220.822eclipse-churn 0.915 0.8790.882eclipse-ent 0.918 emotions 0.366 0.8870.8720.3630.362enron 0.8300.8560.856equinox-churn 0.862 0.8620.862equinox-ent 0.862 0.8620.862flags 0.360 0.2980.294genbase 0.908 Geobacter-sulfurreducens 0.771 0.9630.9630.7480.751Haloarcula_marismortui 0.766 0.8160.816Human3160 0.766 0.6710.670lucene-churn 0.969 0.9690.969lucene-ent 0.969 0.9690.969mimlImg 0.4720.4220.423mylyn-churn 0.926 0.9310.923mylyn-ent 0.927 0.9150.911 pde-churn 0.936 0.9380.930pde-ent 0.936 Plant978 0.727 0.9380.9300.7330.733pyrococcus_furiosus 0.804 0.7840.784Saccharomyces_cerevisiae 0.875 0.8730.873scene 0.4850.2800.280 $\begin{array}{ll} \text{simpleHC} & 0.595 \\ \text{simpleHS} & 0.621 \end{array}$ 0.2940.2940.6210.621SLASHDOT-F 0.893 0.8220.822stackex_chemistry 0.792 0.7100.710 $stackex_chess$ 0.758 0.6680.668 $0.515 \\ 0.406$ $tmc2007-500_sub_0$ 0.678 0.515yeast 0.473 0.406

Table 29: Mean value for: Tversky.LossA0.5B0.5

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 0.261 0.235 birds 0.1470.1600.161Caenorhabditis_elegans 0.195 0.1740.174Drosophila_melanogaster 0.181 0.1790.179eclipse-churn 0.006 0.008 0.008eclipse-ent 0.0060.0090.008emotions 0.2350.2310.230enron 0.2310.3350.335equinox-churn 0.003 0.003 0.003equinox-ent 0.003 0.0030.003flags 0.2040.2390.241genbase 0.187 Geobacter-sulfurreducens 0.141 0.2680.2680.1440.1450.2830.283Haloarcula_marismortui 0.194 Human3160 0.285 0.2850.2850.000lucene-churn 0.000 0.0000.000lucene-ent 0.000 0.000mimlImg 0.291 0.2720.273mylyn-churn 0.006 0.0200.0150.014mylyn-ent 0.006 0.0120.006pde-churn 0.002 0.006pde-ent 0.0030.0050.005Plant978 0.257 0.3170.316pyrococcus_furiosus 0.188 0.2160.215Saccharomyces_cerevisiae 0.176 0.1480.148scene 0.1880.1680.168simpleHC 0.315 0.1980.198simpleHS 0.360 0.4560.4560.317SLASHDOT-F 0.427 0.317stackex_chemistry 0.194 0.2070.171 $stackex_chess$ 0.184 0.171 $tmc2007-500_sub_0$ 0.187 0.1600.1600.2580.258yeast 0.259Table 30: Mean value for: Ranking.Loss

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 0.887 Caenorhabditis_elegans 0.874 Drosophila_melanogaster 0.874 eclipse-churn 0.948 eclipse-ent 0.948 emotions 0.465 0.395enron 0.910equinox-churn 0.915 equinox-ent 0.915 0.915flags 0.440 0.451genbase 0.938 Geobacter-sulfurreducens 0.808 Haloarcula_marismortui 0.810 Human3160 0.892 lucene-churn 0.981 lucene-ent 0.981 $\text{mimlImg} \qquad 0.598$ mylyn-churn 0.912 0.9090.865mylyn-ent 0.914 0.9290.893pde-churn 0.959 0.903Plant978 0.863 0.8170.817pyrococcus_furiosus 0.861 0.8340.892 0.227 Saccharomyces_cerevisiae 0.910 0.892scene 0.6210.227 $\begin{array}{ll} \text{simpleHC} & 0.713 \\ \text{simpleHS} & 0.738 \end{array}$ 0.0760.0760.7460.746SLASHDOT-F 0.941 0.7800.780stackex_chemistry 0.828 0.6440.644 $stackex_chess$ 0.836 0.633 0.632 $0.722 \\ 0.590$ $tmc2007-500_sub_0$ 0.834 0.721yeast 0.620 0.590 Table 31: Mean value for: MacroPrecisionM

Table 32: Mean value for: MacroRecallM

PairWise PairWise-FCMK-N PairWise-FCMK-W

0.553

0.288

0.369

0.364

0.250

0.254

0.640

0.640

0.232

0.584

0.477

0.104

0.549

0.800

0.800

0.348

0.428

0.584

0.240

0.260

0.496

0.224

0.223

0.269

0.501

0.165

0.567

0.535

0.426 0.470 0.337 0.450

0.559

0.667

0.288

0.329

0.324

0.249

0.254

0.640

0.640

0.198

0.584

0.477

0.104

0.563

0.800

0.800

0.349

0.501

0.570

0.240

0.260

0.494

0.227

0.223

0.269

0.501

0.165

0.567

0.535

0.424

0.470

0.342

Azotobacter_vinelandii 0.000

Caenorhabditis_elegans 0.045

Drosophila_melanogaster 0.027

genbase 0.274 Geobacter-sulfurreducens 0.237

Haloarcula_marismortui 0.163

birds 0.170

eclipse-churn 0.220

eclipse-ent 0.200 emotions 0.151

equinox-churn 0.640

equinox-ent 0.640

Human3160 0.239

lucene-ent 0.800

mimlImg 0.180

lucene-churn 0.800

mylyn-churn 0.303

mylyn-ent 0.274

pde-churn 0.440

pde-ent 0.420 Plant978 0.283

scene 0.035

yeast 0.239

 $\begin{array}{ll} {\rm simpleHC} & 0.296 \\ {\rm simpleHS} & 0.111 \end{array}$

SLASHDOT-F 0.157

 $stackex_chess$ 0.150

stackex_chemistry 0.162

 $tmc2007-500_sub_0$ 0.056

pyrococcus_furiosus 0.042

Saccharomyces_cerevisiae 0.070

flags 0.121

enron 0.232

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 0.800 0.848 0.7160.720Caenorhabditis_elegans 0.788 0.8500.850Drosophila_melanogaster 0.781 0.7070.707eclipse-churn 0.911 0.7790.801eclipse-ent 0.911 0.7960.7620.3500.3430.341emotions 0.8820.8610.882enron 0.8770.8770.877equinox-churn equinox-ent 0.877 0.8770.877flags 0.3730.3720.358genbase 0.896 0.8240.824Geobacter-sulfurreducens 0.725 0.7010.707Haloarcula_marismortui 0.719 0.7960.796Human3160 0.821 0.7630.761lucene-churn 0.9660.9660.9660.9660.9660.966lucene-ent $\min I mg$ 0.4640.4100.411 mylyn-churn 0.8710.9150.884mylyn-ent 0.8760.9150.8870.873pde-churn 0.9270.826pde-ent 0.9280.8730.836Plant978 0.776 0.7740.773pyrococcus_furiosus 0.768 0.7610.760Saccharomyces_cerevisiae 0.840 0.8250.825scene 0.4620.2530.253 $0.358 \\ 0.627$ simpleHC 0.594 0.357simpleHS 0.616 0.627SLASHDOT-F 0.894 0.7760.776stackex_chemistry 0.732 0.6380.6380.608 0.671 0.516 $stackex_chess$ 0.735 0.607 $tmc2007-500_sub_0$ 0.733 0.6710.516 yeast 0.531

Table 33: Mean value for: Macro Tversky A0.5 B0.5

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 0.797 0.805 birds 0.8350.7430.742Caenorhabditis_elegans 0.788 0.8130.813Drosophila_melanogaster 0.782 0.7510.751eclipse-churn 0.895 0.8390.830eclipse-ent 0.901 0.8470.814emotions 0.3500.3380.336enron 0.8270.8570.857equinox-churn 0.844 0.8440.844equinox-ent 0.844 0.8440.844flags 0.3450.2850.282genbase 0.907 0.9630.963Geobacter-sulfurreducens 0.720 0.6760.678Haloarcula_marismortui 0.731 0.7890.789Human3160 0.765 0.6700.670lucene-churn 0.964 0.9640.964lucene-ent 0.964 0.9640.964mimlImg 0.4690.4230.425mylyn-churn 0.893 0.8980.8750.849 mylyn-ent 0.898 pde-churn 0.917 0.8360.921 pde-ent 0.916
Plant978 0.729
pyrococcus_furiosus 0.771 0.919 0.731 0.745 $0.905 \\ 0.731$ 0.743Saccharomyces_cerevisiae 0.840 0.831scene 0.484 simpleHC 0.591 simpleHS 0.608 SLASHDOT-F 0.892 0.2640.2640.351 0.6070.3510.6070.819 stackex_chemistry 0.775 stackex_chess 0.744 tmc2007-500_sub_0 0.670 0.663 $0.620 \\ 0.531$ 0.6200.531yeast 0.461 0.394 0.394

Table 34: Mean value for: MicroTversky A0.5B 0.5

9 Combined Means

Hamm	ing.Loss.PairWise Hamming.Lo	oss.Pair Wise.FCMK.N Hamming.Lo		ne.Loss.PairWise Zero.One.Lo	oss.Pairwise.FUMK.N Zero.One.Lo	oss.PairWise.FCMK.W Iversky.Lo	SSAU.5BU.5.PairWise I versky.LossAu	.5B0.5.PairWise.FCMK.N Tversky.LossA0.5	DBU.5.PairWise.FCMK.W Rankin	g.Loss.PairWise Ranking.Lo	oss.Pairwise.FUMK.N Ranking.Los	ss.Pairwise.FCMK.W MacroPre	cisionM.PairWise MacroPrecision	onM.PairWise.FCMK.N MacroPrecisi	onM.PairWise.FCMK.W MacroRec	callWi.PairWise MacroReca	allwi.Pairwise.FCMK.N Ma
Azotobacter_vinelandii	0.887	0.483	0.480	1.000	0.993	0.990	0.831	0.851	0.851	0.261	0.235	0.235	0.887	0.898	0.896	0.000	0.443
birds	0.500	0.146	0.144	1.000	0.975	0.972	0.851	0.801	0.799	0.147	0.160	0.161	0.898	0.729	0.733	0.170	0.553
$Caen or hab dit is _elegans$	0.831	0.283	0.283	1.000	0.820	0.820	0.830	0.728	0.728	0.195	0.174	0.174	0.874	0.862	0.862	0.045	0.668
$Drosophila_melanogaster$	0.845	0.518	0.518	1.000	0.998	0.998	0.829	0.822	0.822	0.181	0.179	0.179	0.874	0.754	0.757	0.027	0.288
eclipse-churn	0.888	0.514	0.480	1.000	0.990	0.989	0.915	0.882	0.879	0.006	0.008	0.008	0.948	0.841	0.819	0.220	0.369
eclipse-ent	0.945	0.539	0.454	1.000	0.996	0.977	0.918	0.887	0.872	0.006	0.009	0.008	0.948	0.815	0.781	0.200	0.364
emotions	0.287	0.243	0.241	0.888	0.802	0.800	0.366	0.363	0.362	0.235	0.231	0.230	0.465	0.395	0.391	0.151	0.250
enron	0.590	0.703	0.703	1.000	1.000	1.000	0.830	0.856	0.856	0.231	0.335	0.335	0.910	0.913	0.913	0.232	0.254
equinox-churn	0.915	0.915	0.915	1.000	1.000	1.000	0.862	0.862	0.862	0.003	0.003	0.003	0.915	0.915	0.915	0.640	0.640
equinox-ent	0.915	0.915	0.915	1.000	1.000	1.000	0.862	0.862	0.862	0.003	0.003	0.003	0.915	0.915	0.915	0.640	0.640
flags	0.444	0.330	0.333	0.995	0.943	0.943	0.360	0.298	0.294	0.204	0.239	0.241	0.440	0.451	0.446	0.121	0.232
genbase	0.911	0.410	0.410	1.000	1.000	1.000	0.908	0.963	0.963	0.187	0.268	0.268	0.938	0.838	0.838	0.274	0.584
Geobacter-sulfurreducens	0.518	0.272	0.274	0.992	0.950	0.952	0.771	0.748	0.751	0.141	0.144	0.145	0.808	0.740	0.752	0.237	0.477
Haloarcula_marismortui	0.602	0.760	0.760	1.000	1.000	1.000	0.766	0.816	0.816	0.194	0.283	0.283	0.810	0.881	0.881	0.163	0.104
Human3160	0.506	0.225	0.224	1.000	0.988	0.988	0.766	0.671	0.670	0.285	0.285	0.285	0.892	0.799	0.798	0.239	0.549
lucene-churn	0.981	0.981	0.981	1.000	1.000	1.000	0.969	0.969	0.969	0.000	0.000	0.000	0.981	0.981	0.981	0.800	0.800
lucene-ent	0.981	0.981	0.981	1.000	1.000	1.000	0.969	0.969	0.969	0.000	0.000	0.000	0.981	0.981	0.981	0.800	0.800
$\min Img$	0.360	0.237	0.238	0.983	0.728	0.729	0.472	0.422	0.423	0.291	0.272	0.273	0.598	0.431	0.432	0.180	0.348
mylyn-churn	0.743	0.683	0.529	0.999	0.996	0.993	0.926	0.931	0.923	0.006	0.020	0.015	0.912	0.909	0.865	0.303	0.428
mylyn-ent	0.780	0.397	0.364	0.999	0.983	0.976	0.927	0.915	0.911	0.006	0.014	0.012	0.914	0.929	0.893	0.274	0.584
pde-churn	0.796	0.883	0.728	1.000	1.000	0.997	0.936	0.938	0.930	0.002	0.006	0.006	0.959	0.903	0.871	0.440	0.240
pde-ent	0.791	0.867	0.722	1.000	1.000	0.999	0.936	0.938	0.930	0.003	0.005	0.005	0.960	0.903	0.873	0.420	0.260
Plant978	0.431	0.280	0.281	1.000	1.000	1.000	0.727	0.733	0.733	0.257	0.317	0.316	0.863	0.817	0.817	0.283	0.496
pyrococcus_furiosus	0.776	0.590	0.586	1.000	1.000	1.000	0.804	0.784	0.784	0.188	0.216	0.215	0.861	0.834	0.834	0.042	0.224
Saccharomyces_cerevisiae	0.830	0.660	0.660	1.000	1.000	1.000	0.875	0.873	0.873	0.176	0.148	0.148	0.910	0.892	0.892	0.070	0.223
scene	0.324	0.093	0.093	0.997	0.380	0.381	0.485	0.280	0.280	0.188	0.168	0.168	0.621	0.227	0.227	0.035	0.269
$_{ m simple HC}$	0.390	0.103	0.103	1.000	0.638	0.638	0.595	0.294	0.294	0.315	0.198	0.198	0.713	0.076	0.076	0.296	0.501
$\begin{array}{c} { m simpleHC} \\ { m simpleHS} \end{array}$	0.645	0.615	0.615	1.000	1.000	1.000	0.621	0.621	0.621	0.360	0.456	0.456	0.738	0.746	0.746	0.111	0.165
SLASHDOT-F	0.886	0.264	0.264	1.000	0.996	0.996	0.893	0.822	0.822	0.427	0.317	0.317	0.941	0.780	0.780	0.157	0.567
stackex_chemistry	0.419	0.128	0.128	1.000	0.918	0.918	0.792	0.710	0.710	0.194	0.207	0.207	0.828	0.644	0.644	0.162	0.535
stackex_chess	0.399	0.158	0.158	1.000	0.955	0.954	0.758	0.668	0.668	0.184	0.171	0.171	0.836	0.633	0.632	0.150	0.426
$tmc2007-500_sub_0$	0.404	0.180	0.180	1.000	0.966	0.966	0.678	0.515	0.515	0.187	0.160	0.160	0.834	0.722	0.721	0.056	0.470
veast	0.432	0.315	0.314	1 000	0.986	0.986	0.473	0.406	0.406	0.259	0.258	0.258	0.620	0.590	0.590	0.239	0.337

Table 35: Combined Mean values

10 Raw Ranks

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 3.000 Caenorhabditis_elegans 3.000 Drosophila_melanogaster 3.000 1.000 eclipse-churn 3.000 2.000 eclipse-ent 3.000 2.000 emotions 3.000 2.000 1.000 2.000 3.000 enron 2.000 2.000 2.000 equinox-churn 2.000 1.000 1.500 1.000 equinox-ent 2.000 flags 3.000 genbase 3.000 Geobacter-sulfurreducens 3.000 2.000Haloarcula_marismortui 1.000 2.500 2.000 2.000 2.000 1.000 2.000 3.000 3.000 1.000 1.000 1.000 1.000 1.000 1.000 2.000 2.000 2.500Human3160 3.000 1.000 lucene-churn 2.000 lucene-ent $\min I mg$ 3.000 2.000mylyn-churn 3.000 mylyn-ent 3.000 pde-churn 2.000 pde-ent 2.000 Plant978 3.000 pyrococcus_furiosus 3.000 Saccharomyces_cerevisiae 3.000 scene 3.000 $\begin{array}{ll} \text{simpleHC} & 3.000 \\ \text{simpleHS} & 3.000 \end{array}$ SLASHDOT-F 3.000 stackex_chemistry 3.000 stackex_chess 3.000 tmc2007-500_sub_0 3.000 yeast 3.000 2.000 1.000 1.000 Table 36: Ranks for: Hamming.Loss

PairWise PairWise-FCMK-N PairWise-FCMK-W
ii 3.000 2.000 1.000 Azotobacter_vinelandii 3.000
birds 3.000
Caenorhabditis_elegans 3.000 2.000 2.000 1.500 1.500 1.000 1.500Caenorhabditis_elegans 3.000 1.500

Drosophila_melanogaster 3.000 1.500
eclipse-churn 3.000 2.000
emotions 3.000 2.000
emotions 3.000 2.000
equinox-churn 2.000 2.000
equinox-ent 2.000 2.000
flags 3.000 2.000
genbase 2.000 2.000
Geobacter-sulfurreducens 3.000 1.000
Haloarcula_marismortui 2.000 2.000
Human3160 3.000 1.500
lucene-churn 2.000 2.000
mimlImg 3.000 1.000
mylyn-churn 3.000 2.000
mylyn-churn 3.000 2.000
mylyn-churn 3.000 2.000
pde-churn 2.500 2.500
pde-ent 2.500 2.500
pde-ent 2.500 2.500
Plant978 2.000 2.000
Saccharomyces_cerevisiae 2.000 2.000
Saccharomyces_cerevisiae 2.000 2.000
SimpleHC 3.000 1.500
simpleHC 3.000 1.500
simpleHS 2.000 2.000
SLASHDOT-F 3.000 1.500
stackex_chess 3.000 1.500
yeast 3.000 1.500
stacker_choss 3.000 1.500
stackex_chess 3.000 1.500 Drosophila_melanogaster 3.000 1.000 1.000 2.000
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Table 37: Ranks for: Zero.One.Loss

Caenorhabditis_elegans 3.000 2.000Drosophila_melanogaster 3.000 1.000 2.000eclipse-ent 3.000
emotions 3.000

state of the state of t 2.000 1.000 2.000 1.000 2.000 1.000 enron 1.000 2.000 3.000 equinox-churn 2.000 2.000 2.000 equinox-ent 2.000 2.000 2.000 flags 3.000 2.000 1.000 genbase 1.000 Geobacter-sulfurreducens 3.000 2.5002.5001.000 2.000 Haloarcula_marismortui 1.000 2.5002.500Human3160 3.000 2.000 1.000 lucene-churn 2.000 lucene-ent 2.000 2.000 2.0002.000 2.000 $3.000 \\ 2.000$ $\min I mg$ 1.000 2.000 mylyn-churn 3.000 1.000 mylyn-ent 3.000 pde-churn 2.000 2.000 1.000 3.0001.000 pde-ent 2.000 Plant978 1.000 3.000 1.000 2.000 3.000 pyrococcus_furiosus 3.000 2.000 1.000 Saccharomyces_cerevisiae 3.000 1.000 2.000scene 3.0001.000 2.000 $\begin{array}{ll} \text{simpleHC} & 3.000 \\ \text{simpleHS} & 3.000 \end{array}$ $2.000 \\ 1.000$ 1.000 2.000SLASHDOT-F 3.000 1.000 2.000stackex_chemistry 3.000 1.500 1.5002.000 2.000 2.000 $stackex_chess$ 3.000 1.000 $tmc2007-500_sub_0$ 3.000 1.000 yeast 3.000 Table 38: Ranks for: Tversky.LossA0.5B0.5

Azotobacter_vinelandii 1.000

birds 3.000

PairWise PairWise-FCMK-N PairWise-FCMK-W

2.000

1.000

1.000

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 3.000 birds 1.0003.000 Caenorhabditis_elegans 3.000 1.000 2.000Drosophila_melanogaster 3.000 1.000 eclipse-churn 1.000 3.0002.0003.000 eclipse-ent 1.0002.0002.000 emotions 1.000 enron 1.000 2.000 3.0002.000 equinox-churn 2.000 2.0002.000 equinox-ent 2.000 2.000flags 1.000 2.000 3.000genbase 1.000 Geobacter-sulfurreducens 1.000 2.5002.5002.000 3.000Haloarcula_marismortui 1.000 2.500Human3160 1.000 3.000 lucene-churn 2.000 2.000 2.000 lucene-ent $\min IImg$ 1.000 1.000 3.000 mylyn-churn 3.000 mylyn-ent pde-churn 1.000 2.500pde-ent 1.0002.500Plant978 1.000 3.000 pyrococcus_furiosus 1.000 3.000 1.500 Saccharomyces_cerevisiae 3.000 scene 3.000simpleHC 3.000 2.000 2.000 simpleHS 1.000 SLASHDOT-F 3.000 stackex_chemistry 1.000 $stackex_chess$ 3.000 2.000 $tmc2007-500_sub_0$ 3.000 2.000 2.000 1.000 yeast 3.000 1.000 Table 39: Ranks for: Ranking.Loss

PairWise PairWise-FCMK-N PairWise-FCMK-W Caenorhabditis_elegans 3.000 Drosophila_melanogaster 3.000 eclipse-churn 3.000 eclipse-ent 3.000 emotions 3.000 enron 1.000 equinox-churn 2.000 equinox-ent 2.000 flags 1.000 genbase 3.000 Geobacter-sulfurreducens 3.000 Haloarcula_marismortui 1.000 Human3160 3.000 lucene-churn 2.000 lucene-ent 2.000 $\text{mimlImg} \qquad 3.000$ 1.000 2.000 3.000 2.000 mylyn-churn 3.000 mylyn-ent 2.000 pde-churn 3.000 2.000 1.000 1.000 pde-ent 3.000 Plant978 3.000 pyrococcus_furiosus 3.000
Saccharomyces_cerevisiae 3.000 1.000 scene 3.0001.000 2.000 simpleHC 3.000 simpleHS 1.000 2.000 3.000 2.000 1.000 2.000 SLASHDOT-F 3.000 1.000 stackex_chemistry 3.000 1.000 2.000 stackex_chess 3.000 tmc2007-500_sub_0 3.000 yeast 3.000 2.000 2.000 1.000 1.000 1.000 2.000

Table 40: Ranks for: MacroPrecisionM

Caenorhabditis_elegans 1.000 Drosophila_melanogaster 1.000 2.5002.500eclipse-churn 1.000 3.000 2.000 eclipse-ent 1.000 emotions 1.000 3.000 2.000 3.000 2.000enron 1.0002.5002.500equinox-churn 2.000 2.000 2.000 equinox-ent 2.000 2.000 2.000 flags 1.000 3.000 2.000 genbase 1.000 Geobacter-sulfurreducens 1.000 2.5002.5003.000 2.000 Haloarcula_marismortui 3.000 1.500 1.500Human3160 1.000 2.000 3.000 lucene-churn 2.000 lucene-ent 2.000 2.000 2.000 2.000 2.000 mimlImg 1.000 2.000 3.000 mylyn-churn 1.000 2.000 3.000 mylyn-ent 1.000 pde-churn 3.000 3.000 2.000 1.500 1.500pde-ent 3.000 Plant978 1.000 1.500 1.5003.000 2.000 pyrococcus_furiosus 1.000 2.000 3.000 Saccharomyces_cerevisiae 1.000 2.5002.500scene 1.000 2.5002.500 $\begin{array}{ll} {\rm simpleHC} & 1.000 \\ {\rm simpleHS} & 1.000 \end{array}$ 3.000 2.0003.0002.000SLASHDOT-F 1.000 2.5002.500stackex_chemistry 1.000 2.5002.500stackex_chess 1.000 3.0002.0002.500 2.000 $tmc2007-500_sub_0$ 1.000 2.500yeast 1.000 3.000 Table 41: Ranks for: MacroRecallM

Azotobacter_vinelandii 1.000

birds 1.000

PairWise PairWise-FCMK-N PairWise-FCMK-W

2.000

3.000

3.000

2.000

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 1.000 3.000 2.000 1.000 3.000 Caenorhabditis_elegans 2.000 Drosophila_melanogaster 3.000 1.000 2.000 eclipse-churn 3.000 2.000 1.000 eclipse-ent 3.000 2.000 1.000 3.000 2.000 emotions 1.000 2.000 1.000 3.000enron 2.000 2.000 2.000equinox-churn 2.000 2.000 2.000equinox-ent flags 3.000 2.0001.000 3.000 1.500 1.500genbase Geobacter-sulfurreducens 3.000 1.000 2.000 1.000 2.5002.500Haloarcula_marismortui Human3160 3.000 2.0001.000 lucene-churn 2.000 2.0002.000 2.000 2.0002.000lucene-ent $\min I mg$ 3.000 1.000 2.000mylyn-churn 1.000 3.0002.000 mylyn-ent 1.000 3.0002.000pde-churn 3.000 2.0001.000 pde-ent 3.0002.0001.000 Plant978 3.000 2.000pyrococcus_furiosus 3.000 2.000Saccharomyces_cerevisiae 3.000 1.000 scene 3.0001.000 simpleHC 3.000 $2.000 \\ 3.000$ simpleHS 1.000 SLASHDOT-F 3.000 stackex_chemistry 3.000 2.000 2.000 1.000 $stackex_chess$ 3.000 $tmc2007-500_sub_0$ 3.000 1.000 yeast 3.0002.000

Table 42: Ranks for: Macro Tversky A0.5 B0.5

PairWise PairWise-FCMK-N PairWise-FCMK-W Azotobacter_vinelandii 1.000 birds 3.0002.0001.000 Caenorhabditis_elegans 1.000 3.000Drosophila_melanogaster 3.000 1.000 eclipse-churn 3.000 2.000eclipse-ent 3.000 2.000emotions 3.000 2.000 1.000 2.000 enron equinox-churn 2.000 2.000 equinox-ent 2.000 2.000flags 3.0002.000genbase 1.000 2.500Geobacter-sulfurreducens 3.000 1.000 Haloarcula_marismortui 1.000 2.500Human3160 3.000 lucene-churn 2.000 2.0002.000 lucene-ent 2.000 2.000 mimlImg 3.000
mylyn-churn 2.000
mylyn-ent 3.000
pde-churn 2.000 $\min I mg$ 1.000 $3.000 \\ 2.000$ 3.000 pde-ent 2.000
Plant978 1.000
pyrococcus_furiosus 3.000
Saccharomyces_cerevisiae 3.000 3.000 2.000 2.000 scene 3.000
simpleHC 3.000
simpleHS 3.000
SLASHDOT-F 3.000 1.000 2.000 1.000 1.000 2.000 stackex_chemistry 3.000 stackex_chess 3.000 tmc2007-500_sub_0 3.000 yeast 3.000 1.000 2.000 2.000 2.000 1.000

Table 43: Ranks for: MicroTversky A0.5B 0.5