

Supplemental Material for “Proximal Methods for Sparse Optimal Scoring and Discriminant Analysis”

This document provides supplemental materials for the manuscript *Proximal Methods for Sparse Optimal Scoring and Discriminant Analysis*. Specifically, we provide detailed results for the numerical analysis provided in Section 3 of the manuscript. Table 1 provides average run-time, misclassification rate, and cardinality of classifiers for the classification trials described in Section 3.1 of the manuscript, while Tables 2, 3, 4, and 5 provide a summary of the data sets, misclassification rate, run-time, and cardinality of classifiers, respectively, for the analysis of the UC Riverside Time-Series repository described in Section 3.4.

Table 1: Experimental results for synthetic data. All results are listed in the format “mean (standard deviation)”. In all experiments, $n_{\text{train}} = 25K$ and $n_{\text{test}} = 250K$, with total number of predictor variables equal to $qp = 500(K - 1)$.

Experiment	Method	Misclassification Rate	Cardinality	Run-time (s)
$r = 0$ $K = 2$	PG	0.02 (0.02)	117.3 (99.1)	39.64 (1)
	PGB	0.021 (0.02)	116.6 (109.24)	40.09 (1)
	APG	0.006 (0.01)	130.4 (29.81)	7.3 (0.4)
	APGB	0.017 (0.01)	82.1 (32.61)	7.23 (0.5)
	ADMM	0.007 (0.01)	188.3 (87.93)	191.77 (0.7)
	SZVD	0 (0)	443.4 (11.38)	808.21 (2.8)
	LARS	0.072 (0.02)	38 (0)	167.75 (2.9)
$r = 0.1$ $K = 2$	PG	0.021 (0.05)	162.5 (135.13)	58.35 (4.9)
	PGB	0.024 (0.03)	154.1 (150.1)	61.05 (6.3)
	APG	0.011 (0.01)	114.1 (32.86)	8 (0.6)
	APGB	0.011 (0.01)	104.5 (42.63)	7.92 (0.8)
	ADMM	0.005 (0.01)	246.7 (158.85)	192.96 (1)
	SZVD	0 (0)	433 (15.48)	809.34 (7)
	LARS	0.066 (0.02)	38.4 (0.7)	157.46 (4.2)
$r = 0.5$ $K = 2$	PG	0 (0)	220.5 (96.89)	345.09 (45.6)
	PGB	0.003 (0.01)	157.7 (85.91)	369.68 (51.4)
	APG	0.003 (0.01)	121.4 (34.43)	20.69 (2.4)
	APGB	0.004 (0.01)	109.1 (33.25)	21.07 (3.1)
	ADMM	0.004 (0)	69.3 (28)	368.7 (1.4)
	SZVD	0 (0)	456.4 (24.72)	2089.66 (30.1)
	LARS	0.015 (0.01)	38.2 (0.42)	246.64 (2.7)
$r = 0.9$ $K = 2$	PG	0 (0)	193.7 (29.11)	657.19 (105.2)
	PGB	0.001 (0)	170.7 (45.21)	683.53 (75)
	APG	0 (0)	189.5 (17.39)	16.75 (2.1)
	APGB	0.001 (0)	189.6 (14.91)	17.04 (2.1)
	ADMM	0 (0)	65.3 (6.78)	433.27 (14.2)
	SZVD	0 (0)	457.8 (22.92)	3929.87 (150.3)
	LARS	0 (0)	38.2 (0.42)	331.56 (10.3)

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Experiment	Method	Misclassification Rate	Cardinality	Run-time (s)
$r = 0$	PG	0.017 (0.01)	651.7 (397.13)	55.93 (1.9)
$K = 4$	PGB	0.022 (0.02)	481.8 (291.2)	55.51 (1.4)
	APG	0.017 (0.01)	384.3 (34.73)	26.97 (1.3)
	APGB	0.022 (0.01)	367 (43.11)	26.84 (0.7)
	ADMM	0.007 (0)	1177.7 (398.65)	1109.78 (17.9)
	SZVD	0.002 (0)	1694 (296.47)	5646.44 (240)
	LARS	0.052 (0.02)	342.4 (2.12)	8570.18 (382)
$r = 0.1$	PG	0.029 (0.02)	515 (307.45)	82.92 (7.4)
$K = 4$	PGB	0.039 (0.03)	485.8 (322.33)	82.4 (6.3)
	APG	0.032 (0.02)	413.9 (36.74)	20.9 (1.1)
	APGB	0.034 (0.02)	441.3 (60.78)	20.92 (1.1)
	ADMM	0.005 (0)	1290 (294.84)	713.07 (2.6)
	SZVD	0.002 (0)	1495.9 (181.54)	4581.3 (102.3)
	LARS	0.048 (0.01)	343.4 (2.76)	8065.69 (17.2)
$r = 0.5$	PG	0 (0)	994.9 (52.97)	191.82 (30)
$K = 4$	PGB	0 (0)	926.5 (185.06)	188.04 (31.5)
	APG	0.006 (0.01)	508.8 (52.17)	24.71 (3)
	APGB	0.004 (0.01)	483.7 (62.25)	24.79 (2.7)
	ADMM	0 (0)	652.6 (180.66)	625.09 (52.4)
	SZVD	0 (0)	1582.9 (186.18)	3033.39 (284)
	LARS	0.003 (0)	343.1 (2.73)	5228.48 (389.2)
$r = 0.9$	PG	0 (0)	781.2 (186.2)	386.09 (32.4)
$K = 4$	PGB	0 (0)	850.7 (160.9)	381.63 (29.3)
	APG	0 (0)	756.6 (138.26)	34.43 (2.4)
	APGB	0 (0)	732 (60.46)	34.48 (2.5)
	ADMM	0 (0)	700.5 (72.07)	1047.38 (48.4)
	SZVD	0 (0)	1622.7 (127.88)	5719.11 (768)
	LARS	0 (0)	343.1 (2.38)	10581.65 (3181)

Table 2: Properties of data sets used from the UC Riverside Time-Series Clustering and Classification repository: data id #, data set name, number of training and testing samples using default split, number of classes K , and number of predictor variables p .

ID	Name	Train	Test	K	p
2	ArrowHead	36	175	3	251
3	Beef	30	30	5	470
4	BeetleFly	20	20	2	512
5	BirdChicken	20	20	2	512
6	Car	60	60	4	577
7	CBF	30	900	3	128
9	CinCECGTorso	40	1380	4	1639
10	Coffee	28	28	2	286
11	Computers	250	250	2	720
19	Earthquakes	322	139	2	512
22	ECGFiveDays	23	861	2	136
28	Fish	175	175	7	463
31	GunPoint	50	150	2	150
32	Ham	109	105	2	431

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ID	Name	Train	Test	K	p
33	HandOutlines	1000	370	2	2709
34	Haptics	155	308	5	1092
35	Herring	64	64	2	512
36	InlineSkate	100	550	7	1882
37	InsectWingbeatSound	220	1980	11	256
39	LargeKitchenAppliances	375	375	3	720
40	Lightning2	60	61	2	637
42	Mallat	55	2345	8	1024
43	Meat	60	60	3	448
48	MoteStrain	20	1252	2	84
51	OliveOil	30	30	4	570
52	OSULeaf	200	242	6	427
55	Plane	105	105	7	144
59	RefrigerationDevices	375	375	3	720
60	ScreenType	375	375	3	720
61	ShapeletSim	20	180	2	500
63	SmallKitchenAppliances	375	375	3	720
64	SonyAIBORobotSurface1	20	601	2	70
65	SonyAIBORobotSurface2	27	953	2	65
66	StarLightCurves	1000	8236	3	1024
69	Symbols	25	995	6	398
71	ToeSegmentation1	40	228	2	277
72	ToeSegmentation2	36	130	2	343
73	Trace	100	100	4	275
74	TwoLeadECG	23	1139	2	82
76	UWaveGestureLibraryAll	896	3582	8	945
81	Wine	57	54	2	234
82	WordSynonyms	267	638	25	270
83	Worms	181	77	5	900
84	WormsTwoClass	181	77	2	900
85	Yoga	300	3000	2	426
90	BME	30	150	3	128
91	Chinatown	20	343	2	24
96	EOGHorizontalSignal	362	362	12	1250
97	EOGVerticalSignal	362	362	12	1250
98	EthanolLevel	504	500	4	1751
99	FreezerRegularTrain	150	2850	2	301
100	FreezerSmallTrain	28	2850	2	301
107	GunPointAgeSpan	135	316	2	150
108	GunPointMaleVersusFemale	135	316	2	150
109	GunPointOldVersusYoung	136	315	2	150
110	HouseTwenty	40	119	2	2000
114	MixedShapesRegularTrain	500	2425	5	1024
115	MixedShapesSmallTrain	100	2425	5	1024
122	Rock	20	50	4	2844
123	SemgHandGenderCh2	300	600	2	1500
124	SemgHandMovementCh2	450	450	6	1500
125	SemgHandSubjectCh2	450	450	5	1500

Table 3: Misclassification rate for each classification heuristic for each data set in the UCR repository. We include SOS with accelerated proximal gradient (APG), alternating direction method of multipliers (ADMM), least angle regression (LARS), as well as sparse zero-variance discriminant analysis (SZVD), and nearest neighbour classifiers using Euclidean distance (ED), dynamic time warping distance with window width $w = 100$ (DTW), and dynamic time warping distance with learned window width (DTWL). The misclassification rates for the three nearest neighbour classifiers were provided by the UCR repository documentation. Trained window width for DTWL is given in parentheses. Misclassification rates are omitted for LARS for any data sets for which LARS failed to terminate within 11 days.

ID	Name	APG	ADMM	SZVD	LARS	ED	DTW	DTWL
2	ArrowHead	0.3143	0.2800	0.3086	0.2971	0.2000	0.2971	0.2000 (0)
3	Beef	0.1000	0.1000	0.0333	0.1000	0.3333	0.3667	0.3333 (0)
4	BeetleFly	0.1500	0.2000	0.3000	0.1500	0.2500	0.3000	0.3000 (7)
5	BirdChicken	0.4000	0.3500	0.3000	0.4500	0.4500	0.2500	0.3000 (6)
6	Car	0.2167	0.2167	0.2167	0.2167	0.2667	0.2667	0.2333 (1)
7	CBF	0.1000	0.1711	0.1233	0.1767	0.1478	0.0033	0.0044 (11)
9	CinCECGTorso	0.5058	0.5572	0.5435	-	0.1029	0.3493	0.0696 (1)
10	Coffee	0.0000	0.0000	0.0000	0.0357	0.0000	0.0000	0.0000 (0)
11	Computers	0.4880	0.5160	0.5160	0.4840	0.4240	0.3000	0.3800 (12)
19	Earthquakes	0.2878	0.3309	0.3669	0.3165	0.2878	0.2806	0.2734 (6)
22	ECGFiveDays	0.1429	0.0418	0.0151	0.2172	0.2033	0.2323	0.2033 (0)
28	Fish	0.1886	0.1600	0.2800	0.1543	0.2171	0.1771	0.1543 (4)
31	GunPoint	0.2333	0.2067	0.1733	0.2800	0.0867	0.0933	0.0867 (0)
32	Ham	0.2857	0.3143	0.4571	0.2286	0.4000	0.5333	0.4000 (0)
33	HandOutlines	0.1270	0.1162	0.2541	0.1162	0.1378	0.1189	0.1378 (0)
34	Haptics	0.5357	0.5455	0.6461	0.5844	0.6299	0.6234	0.5877 (2)
35	Herring	0.3906	0.4375	0.4219	0.4531	0.4844	0.4688	0.4688 (5)
36	InlineSkate	0.7218	0.7691	0.7600	-	0.6582	0.6164	0.6127 (14)
37	InsectWingbeatSound	0.8364	0.8460	0.7677	0.3929	0.4384	0.6449	0.4152 (1)
39	LargeKitchenAppliances	0.5520	0.5787	0.6747	0.5280	0.5067	0.2053	0.2053 (94)
40	Lightning2	0.7049	0.7049	0.2951	0.3115	0.2459	0.1311	0.1311 (6)
42	Mallat	0.1352	0.1352	0.1595	-	0.0857	0.0661	0.0857 (0)
43	Meat	0.0667	0.0333	0.0167	0.0167	0.0667	0.0667	0.0667 (0)
48	MoteStrain	0.1310	0.1302	0.1494	0.1877	0.1214	0.1653	0.1342 (1)
51	OliveOil	0.0667	0.0667	0.0333	0.0333	0.1333	0.1667	0.1333 (0)
52	OSULeaf	0.5826	0.5579	0.6570	0.5041	0.4793	0.4091	0.3884 (7)
55	Plane	0.0286	0.0095	0.0190	-	0.0381	0.0000	0.0000 (5)
59	RefrigerationDevices	0.6853	0.6453	0.6853	0.6907	0.6053	0.5360	0.5600 (8)
60	ScreenType	0.5653	0.6160	0.6693	0.5627	0.6400	0.6027	0.5893 (17)
61	ShapeletSim	0.5111	0.5333	0.4667	0.5167	0.4611	0.3500	0.3000 (3)
63	SmallKitchenAppliances	0.4373	0.5920	0.5760	0.4107	0.6587	0.3573	0.3280 (15)
64	SonyAIBORobotSurface1	0.1647	0.2446	0.2612	0.1181	0.3045	0.2745	0.3045 (0)
65	SonyAIBORobotSurface2	0.2487	0.1899	0.1480	0.2455	0.1406	0.1689	0.1406 (0)
66	StarLightCurves	0.1866	0.1655	0.3039	0.2332	0.1512	0.0934	0.0947 (16)
69	Symbols	0.1658	0.1286	0.1648	0.2181	0.1005	0.0503	0.0623 (8)
71	ToeSegmentation1	0.4211	0.4518	0.4605	0.3772	0.3202	0.2281	0.2500 (8)
72	ToeSegmentation2	0.4462	0.5385	0.4462	0.4308	0.1923	0.1615	0.0923 (5)
73	Trace	0.3100	0.3300	0.2300	0.3600	0.2400	0.0000	0.0100 (3)
74	TwoLeadECG	0.1159	0.1817	0.0421	0.2011	0.2529	0.0957	0.1317 (4)
76	UWaveGestureLibraryAll	0.1399	0.1329	0.7490	-	0.0519	0.1083	0.0343 (4)
81	Wine	0.1296	0.1296	0.1481	-	0.3889	0.4259	0.3889 (0)
82	WordSynonyms	0.9577	0.9498	0.7492	-	0.3824	0.3511	0.2618 (9)
83	Worms	0.6753	0.6753	0.6623	0.6364	0.5455	0.4156	0.4675 (9)

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ID	Name	APG	ADMM	SZVD	LARS	ED	DTW	DTWL
84	WormsTwoClass	0.4286	0.4675	0.4675	0.4026	0.3896	0.3766	0.4156 (7)
85	Yoga	0.4417	0.3650	0.4290	0.4647	0.1697	0.1637	0.1560 (7)
90	BME	0.0400	0.0533	0.1067	0.0200	0.1667	0.1000	0.0200 (4)
91	Chinatown	0.0204	0.0146	0.0583	0.0204	0.0466	0.0437	0.0466 (0)
96	EOGHorizontalSignal	0.9669	0.9779	0.7845	-	0.5829	0.4972	0.5249 (1)
97	EOGVerticalSignal	0.8978	0.9116	0.7541	-	0.5580	0.5525	0.5249 (2)
98	EthanolLevel	0.3100	0.2680	0.1180	0.2580	0.7260	0.7240	0.7180 (1)
99	FreezerRegularTrain	0.0112	0.0039	0.0200	0.0154	0.1951	0.1011	0.0930 (1)
100	FreezerSmallTrain	0.0775	0.0744	0.1260	0.0716	0.3242	0.2411	0.3242 (0)
107	GunPointAgeSpan	0.1297	0.1108	0.2943	0.1297	0.1013	0.0823	0.0348 (3)
108	GunPointMaleVersusFemale	0.2627	0.0190	0.2753	0.2658	0.0253	0.0032	0.0253 (0)
109	GunPointOldVersusYoung	0.0444	0.0032	0.1079	0.0540	0.0476	0.1619	0.0349 (4)
110	HouseTwenty	0.2941	0.2605	0.2773	0.2857	0.3361	0.0756	0.0588 (33)
114	MixedShapesRegularTrain	0.2115	0.1922	0.3287	0.1357	0.1027	0.1584	0.0911 (4)
115	MixedShapesSmallTrain	0.2070	0.2247	0.3361	0.2503	0.1645	0.2202	0.1674 (7)
122	Rock	0.1800	0.1600	0.2800	-	0.1600	0.4000	0.1600 (0)
123	SemgHandGenderCh2	0.1267	0.1667	0.2733	0.1167	0.2383	0.1983	0.1550 (1)
124	SemgHandMovementCh2	0.5511	0.5844	0.6378	-	0.6311	0.4156	0.3622 (1)
125	SemgHandSubjectCh2	0.2911	0.2600	0.3644	-	0.5956	0.2733	0.2000 (3)

Table 4: Run-time for each classification heuristic for each data set in the UCR repository. We include SOS with accelerated proximal gradient (APG), alternating direction method of multipliers (ADMM), least angle regression (LARS), as well as sparse zero-variance discriminant analysis (SZVD). Run-times for LARS are omitted for any data sets for which LARS failed to terminate within 11 days.

ID	Name	APG	ADMM	SZVD	LARS
2	ArrowHead	867.7429	1025.1487	113.2307	3526.9899
3	Beef	3980.5239	2591.9131	1062.0134	73234.1903
4	BeetleFly	159.9037	698.7224	208.5861	39.3198
5	BirdChicken	253.6606	600.1550	213.8664	40.1300
6	Car	2998.8613	2357.9195	1292.4590	95334.3357
7	CBF	417.2809	853.6979	30.9375	1157.3922
9	CinCECGTorso	7296.3147	3939.5168	20674.4925	-
10	Coffee	82.9743	367.2215	31.8861	13.4913
11	Computers	231.6054	1763.1513	203.7442	210.4383
19	Earthquakes	240.1216	2434.4915	95.3329	108.4791
22	ECGFiveDays	109.3320	455.9858	14.6725	8.8075
28	Fish	6806.4355	9508.3007	973.7876	155465.8542
31	GunPoint	97.7038	512.9767	15.2301	14.2667
32	Ham	246.1398	996.4868	114.6033	119.1953
33	HandOutlines	1763.4052	70457.7002	9464.0448	11240.4716
34	Haptics	9017.7939	11161.6824	9572.8663	927716.4034
35	Herring	285.8157	680.6558	181.6588	69.9093
36	InlineSkate	20313.6309	16245.0721	77314.6873	-
37	InsectWingbeatSound	3762.4742	15646.7234	55.5113	63461.3970
39	LargeKitchenAppliances	2444.9745	10143.7128	699.9665	124193.3800
40	Lightning2	324.9700	809.6486	373.5857	80.4998
42	Mallat	9339.7845	5149.6596	9654.0132	-
43	Meat	1550.1274	1593.5557	429.8809	16024.2990
48	MoteStrain	54.6368	409.4616	8.3726	3.9809

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ID	Name	APG	ADMM	SZVD	LARS
51	OliveOil	3785.0606	2240.3536	1534.3542	59326.8221
52	OSULeaf	1227.9899	4808.3503	359.4504	28529.6066
55	Plane	1728.1648	2198.4375	38.8656	-
59	RefrigerationDevices	1325.2159	5085.1696	370.9155	53331.3893
60	ScreenType	1341.4867	5037.0105	366.4079	70004.3825
61	ShapeletSim	96.1854	396.0298	91.8168	21.0331
63	SmallKitchenAppliances	1919.0884	8822.9346	709.4911	42267.5667
64	SonyAIBORobotSurface1	33.0957	208.6615	3.8000	2.3504
65	SonyAIBORobotSurface2	30.8110	205.9848	3.6570	1.8673
66	StarLightCurves	464.0421	26258.1345	1080.3378	20552.7200
69	Symbols	4805.7514	3114.9222	907.5300	84786.9165
71	ToeSegmentation1	129.5906	489.1755	50.3015	26.2883
72	ToeSegmentation2	178.0249	505.9003	79.4976	32.1584
73	Trace	945.2016	2337.8978	156.1469	17324.6228
74	TwoLeadECG	75.2942	397.2834	7.8548	4.6447
76	UWaveGestureLibraryAll	5577.5809	79285.5174	373.6989	-
81	Wine	73.3307	243.4405	17.0091	-
82	WordSynonyms	8672.5487	30406.3549	164.4553	-
83	Worms	1698.9937	6220.7228	2648.7585	226173.1917
84	WormsTwoClass	408.2573	4754.5571	1450.3384	528.8358
85	Yoga	205.4878	4274.9400	85.2666	133.4155
90	BME	453.8559	914.0893	32.6769	1316.3245
91	Chinatown	44.2419	317.1874	4.6129	0.7873
96	EOGHorizontalSignal	30869.9612	51353.6958	10399.9395	-
97	EOGVerticalSignal	63790.8223	147077.1163	42152.1318	-
98	EthanolLevel	11307.7959	79502.4557	34399.0616	609892.9519
99	FreezerRegularTrain	180.6726	978.7104	40.8482	39.3287
100	FreezerSmallTrain	143.0833	548.4519	61.3319	17.3759
107	GunPointAgeSpan	46.6452	758.6902	2.0038	15.3991
108	GunPointMaleVersusFemale	55.5758	683.9232	2.0030	16.0115
109	GunPointOldVersusYoung	41.8935	733.4425	1.9801	16.1709
110	HouseTwenty	663.2563	1998.2210	7286.4629	1442.3407
114	MixedShapesRegularTrain	5582.8469	55304.2755	2476.2706	576779.6412
115	MixedShapesSmallTrain	3560.1206	3999.2568	5135.5077	557029.0946
122	Rock	6423.7878	3141.1124	84337.8498	-
123	SemgHandGenderCh2	1585.6134	13365.2323	7108.4308	1091.7228
124	SemgHandMovementCh2	15421.1197	34855.9236	13243.9526	-
125	SemgHandSubjectCh2	13497.0049	32577.0185	10778.0259	-

Table 5: Fraction of nonzero discriminant vector features for each classification heuristic for each data set in the UCR repository. We include SOS with accelerated proximal gradient (APG), alternating direction method of multipliers (ADMM), least angle regression (LARS), as well as sparse zero-variance discriminant analysis (SZVD). Cardinalities for LARS discriminant vectors are omitted for any data sets for which LARS failed to terminate within 11 days.

ID	Name	APG	ADMM	SZVD	LARS
2	ArrowHead	0.2590	0.4422	0.9920	0.1036
3	Beef	0.5234	0.5021	1.0000	0.3319
4	BeetleFly	0.0098	0.2695	0.5664	0.0254
5	BirdChicken	0.1895	0.0820	0.9648	0.0273

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ID	Name	APG	ADMM	SZVD	LARS
6	Car	0.5927	0.7348	1.0000	0.2184
7	CBF	0.1797	0.3203	0.8516	0.1094
9	CinCECGTorso	0.1477	0.3844	0.9951	-
10	Coffee	0.0420	0.0490	0.4580	0.0280
11	Computers	0.1528	0.8931	0.9125	0.0250
19	Earthquakes	0.1836	0.9141	0.7969	0.0254
22	ECGFiveDays	0.0956	0.1103	0.9706	0.0294
28	Fish	0.8812	1.0000	1.0000	0.6026
31	GunPoint	0.1333	0.3000	0.9600	0.0267
32	Ham	0.0951	0.5406	0.9026	0.0278
33	HandOutlines	0.1783	0.8749	1.0000	0.0299
34	Haptics	0.4386	0.9734	1.0000	0.3361
35	Herring	0.2266	0.5020	0.7539	0.0254
36	InlineSkate	0.5218	1.0000	1.0000	-
37	InsectWingbeatSound	0.9414	1.0000	1.0000	0.9141
39	LargeKitchenAppliances	0.0083	0.9917	0.9681	0.0972
40	Lightning2	0.0832	0.1868	0.9042	0.0251
42	Mallat	0.1211	0.7490	1.0000	-
43	Meat	0.0737	0.2277	0.9732	0.0938
48	MoteStrain	0.1310	0.1548	0.5595	0.0357
51	OliveOil	0.0825	0.1474	0.9947	0.1912
52	OSULeaf	0.4075	1.0000	1.0000	0.5199
55	Plane	0.8472	0.9583	1.0000	-
59	RefrigerationDevices	0.0944	0.9972	0.9931	0.0972
60	ScreenType	0.2694	0.9972	0.9972	0.0972
61	ShapeletSim	0.0020	0.0400	0.3060	0.0260
63	SmallKitchenAppliances	0.0903	0.9931	0.9931	0.0986
64	SonyAIBORobotSurface1	0.0714	0.1429	0.5143	0.0286
65	SonyAIBORobotSurface2	0.0923	0.2000	0.7231	0.0308
66	StarLightCurves	0.2266	0.7324	1.0000	0.1045
69	Symbols	0.1859	0.6457	1.0000	0.5101
71	ToeSegmentation1	0.0036	0.2780	0.6787	0.0253
72	ToeSegmentation2	0.0758	0.2945	0.5627	0.0262
73	Trace	0.6073	0.5055	1.0000	0.2109
74	TwoLeadECG	0.0610	0.1341	0.7561	0.0366
76	UWaveGestureLibraryAll	0.9323	1.0000	1.0000	-
81	Wine	0.2521	0.4017	0.9615	-
82	WordSynonyms	1.0000	1.0000	1.0000	-
83	Worms	0.7278	0.9889	1.0000	0.3600
84	WormsTwoClass	0.2556	0.8233	0.9333	0.0256
85	Yoga	0.2136	0.9038	1.0000	0.0258
90	BME	0.1016	0.3594	0.7500	0.1016
91	Chinatown	0.0417	0.1667	1.0000	0.0417
96	EOGHorizontalSignal	0.9240	1.0000	1.0000	-
97	EOGVerticalSignal	0.7936	1.0000	1.0000	-
98	EthanolLevel	0.5631	0.9994	1.0000	0.2170
99	FreezerRegularTrain	0.1163	0.4751	0.9734	0.0266
100	FreezerSmallTrain	0.0731	0.0598	0.9601	0.0266
107	GunPointAgeSpan	0.2267	0.5000	1.0000	0.0267
108	GunPointMaleVersusFemale	0.0667	0.7333	1.0000	0.0267
109	GunPointOldVersusYoung	0.1333	0.6867	1.0000	0.0267

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ID	Name	APG	ADMM	SZVD	LARS
110	HouseTwenty	0.0215	0.0450	0.3330	0.0260
114	MixedShapesRegularTrain	0.6455	0.9824	1.0000	0.3545
115	MixedShapesSmallTrain	0.3398	0.8438	1.0000	0.3496
122	Rock	0.0527	0.1558	0.9947	-
123	SemgHandGenderCh2	0.0767	0.8160	0.7447	0.0253
124	SemgHandMovementCh2	0.4187	1.0000	1.0000	-
125	SemgHandSubjectCh2	0.5613	1.0000	1.0000	-