Introduction to ML – HW1

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1 Question 3 part I

========== method: LinearSVC, dataset: Boston50
[0.6862745098039216, 0.8431372549019608, 0.8823529411764706, 0.8235294117647058, 0.6862745098039216, 0.8235294117647058, 0.7, 0.8, 0.62, 0.7]

method: LinearSVC

dataset: Boston50

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.3137	0.1569	0.1176	0.1765	0.3137	0.1765	0.3000	0.2000	0.3800	0.3000	0.2435	0.0831

========== method: LinearSVC, dataset: Boston75
[0.9803921568627451, 0.49019607843137253, 0.9215686274509803, 0.8235294117647058, 0.6274509803921569, 0.9607843137254902, 0.86, 0.8, 0.78, 0.84]

method: LinearSVC

dataset: Boston75

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0196	0.5098	0.0784	0.1765	0.3725	0.0392	0.1400	0.2000	0.2200	0.1600	0.1916	0.1430

========== method: LinearSVC, dataset: Digits
[0.9722222222222222, 0.95, 0.9555555555555556, 0.95, 0.9555555555555556, 0.9611111111111111, 0.9611111111111111, 0.9720670391061452, 0.9329608938547486, 0.9608938547486033]

method: LinearSVC

dataset: Digits

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0278	0.0500	0.0444	0.0500	0.0444	0.0389	0.0389	0.0279	0.0670	0.0391	0.0429	0.0109

========== method: SVC, dataset: Boston50 [0.6862745098039216, 0.8627450980392157, 0.7843137254901961, 0.7647058823529411, 0.7254901960784313, 0.6862745098039216, 0.82, 0.8, 0.76, 0.72]

method: SVC

dataset: Boston50

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.3137	0.1373	0.2157	0.2353	0.2745	0.3137	0.1800	0.2000	0.2400	0.2800	0.2390	0.0548

========== method: SVC, dataset: Boston75 [0.8431372549019608, 0.6666666666666666, 0.7843137254901961, 0.7058823529411765, 0.7843137254901961, 0.8627450980392157, 0.8, 0.7, 0.82, 0.72]

method: SVC

dataset: Boston75

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.1569	0.3333	0.2157	0.2941	0.2157	0.1373	0.2000	0.3000	0.1800	0.2800	0.2313	0.0632

========== method: SVC, dataset: Digits [0.9722222222222222, 0.9944444444444445, 0.9944444444444445, 1.0, 0.9888888888888889, 0.9888888888888889, 0.9888888888888889, 0.9888268156424581, 0.994413407821229, 0.994413407821229]

method: SVC

dataset: Digits

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0278	0.0056	0.0056	0.0000	0.0111	0.0111	0.0111	0.0112	0.0056	0.0056	0.0095	0.0070

========== method: LogisticRegression, dataset: Boston50 [0.8823529411764706, 0.8823529411764706, 0.9019607843137255, 0.8627450980392157, 0.8627450980392157, 0.8431372549019608, 0.88, 0.8, 0.84, 0.88]

method: LogisticRegression

dataset: Boston50

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.1176	0.1176	0.0980	0.1373	0.1373	0.1569	0.1200	0.2000	0.1600	0.1200	0.1365	0.0278

========== method: LogisticRegression, dataset: Boston75 [0.8823529411764706, 0.9803921568627451, 0.8823529411764706, 0.8627450980392157, 0.9607843137254902, 0.8235294117647058, 0.88, 0.88, 0.96, 0.92]

method: LogisticRegression

dataset: Boston75

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.1176	0.0196	0.1176	0.1373	0.0392	0.1765	0.1200	0.1200	0.0400	0.0800	0.0968	0.0477

========== method: LogisticRegression, dataset: Digits [0.9555555555555556, 0.9722222222222222, 0.9777777777777777, 0.9611111111111111, 0.9722222222222222, 0.9888888888888889, 0.9722222222222222, 0.9385474860335196, 0.9776536312849162, 0.9608938547486033]

method: LogisticRegression

dataset: Digits

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0444	0.0278	0.0222	0.0389	0.0278	0.0111	0.0278	0.0615	0.0223	0.0391	0.0323	0.0134

2 Question 3 part II

========== method: LinearSVC, dataset: Boston50

method: LinearSVC

dataset: Boston50

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.2598	0.1969	0.3780	0.3780	0.2126	0.3071	0.3780	0.3465	0.2677	0.2756	0.3000	0.0648

========== method: LinearSVC, dataset: Boston75
method: LinearSVC

dataset: Boston75

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.2362	0.1024	0.0866	0.2362	0.5197	0.2126	0.1811	0.2677	0.2283	0.3071	0.2378	0.1141

========== method: LinearSVC, dataset: Digits
method: LinearSVC

dataset: Digits

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0422	0.0578	0.0600	0.0622	0.0489	0.0511	0.0622	0.0600	0.0622	0.0578	0.0564	0.0065

========== method: SVC, dataset: Boston50

method: SVC

dataset: Boston50

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.2283	0.1732	0.2283	0.2677	0.2913	0.2520	0.2047	0.1969	0.2441	0.2598	0.2346	0.0339

========== method: SVC, dataset: Boston75

method: SVC

dataset: Boston75

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.1890	0.2362	0.2126	0.2362	0.1811	0.2362	0.3071	0.2520	0.2756	0.2441	0.2370	0.0356

========== method: SVC, dataset: Digits

method: SVC

dataset: Digits

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0089	0.0044	0.0067	0.0067	0.0000	0.0133	0.0044	0.0178	0.0244	0.0133	0.0100	0.0069

========== method: LogisticRegression, dataset: Boston50

method: LogisticRegression

dataset: Boston50

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.1732	0.1496	0.1260	0.1181	0.1417	0.1575	0.1811	0.1339	0.1102	0.1339	0.1425	0.0218

========== method: LogisticRegression, dataset: Boston75

method: LogisticRegression

dataset: Boston75

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.1496	0.0787	0.0709	0.0630	0.1102	0.1260	0.1260	0.0945	0.1102	0.1102	0.1039	0.0258

========== method: LogisticRegression, dataset: Digits

method: LogisticRegression

dataset: Digits

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0511	0.0333	0.0444	0.0244	0.0444	0.0311	0.0378	0.0289	0.0400	0.0489	0.0384	0.0084

3 Question 4

========== method: LinearSVC, dataset: X1
method: LinearSVC

dataset: X1

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0778	0.0778	0.0944	0.1000	0.1500	0.0556	0.0667	0.0670	0.1229	0.0838	0.0896	0.0272

========== method: LinearSVC, dataset: X2
method: LinearSVC

dataset: X2

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0111	0.0222	0.0056	0.0222	0.0111	0.0111	0.0056	0.0112	0.0168	0.0000	0.0117	0.0068

========== method: SVC, dataset: X1

method: SVC

dataset: X1

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0111	0.0333	0.0167	0.0167	0.0333	0.0111	0.0111	0.0391	0.0223	0.0279	0.0223	0.0100

========== method: SVC, dataset: X2

method: SVC

dataset: X2

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0111	0.0111	0.0000	0.0278	0.0000	0.0000	0.0056	0.0223	0.0056	0.0112	0.0095	0.0090

========== method: LogisticRegression, dataset: X1
method: LogisticRegression

dataset: X1

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0444	0.0778	0.0722	0.0611	0.0500	0.1000	0.0667	0.0726	0.0670	0.0894	0.0701	0.0158

========== method: LogisticRegression, dataset: X2

method: LogisticRegression

dataset: X2

Fold 1	Fold 2	Fold 3	Fold 4	Fold 5	Fold 6	Fold 7	Fold 8	Fold 9	Fold 10	mean	std dev
0.0167	0.0111	0.0167	0.0111	0.0056	0.0222	0.0278	0.0000	0.0112	0.0112	0.0133	0.0075