Full Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	30.84%	30.19%	446.7	1	27.77%	25.97%	409.63	1	58.82%	58.17%	620.47	1
3	65.18%	62.01%	1126.9	2.522722185	42.33%	35.30%	900.53	2.198398555	77.47%	76.51%	1677.01	2.702805937
6	98.17%	94.70%	2109.12	4.721558093	80.88%	45.10%	1582.74	3.863828333	87.08%	82.03%	3234.74	5.213370509
11	100.00%	99.51%	3892.41	8.71370047	99.42%	48.70%	2550.68	6.22679003	100.00%	88.31%	4684.23	7.549486679
21	100.00%	99.91%	5720.99	12.8072308	100.00%	62.27%	3250.57	7.935380709				0
41				0				0				0
81				0				0				0
161				0				0				0

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	63.40%	49.30%	186.94	1	47.10%	25.60%	152.38	1	74.20%	67.30%	228.86	1
20/80	57.80%	49.20%	362.00	1.936450198	48.70%	28.80%	303.94	1.994618716	68.50%	67.20%	462.25	2.01979376
30/70	55.30%	50.80%	499.44	2.671659356	41.60%	27.80%	445.15	2.921315133	69.40%	66.70%	717.55	3.135322905
40/60	55.80%	49.00%	643.95	3.444688135	40.60%	31.20%	610.80	4.009400053	65.50%	65.50%	927.69	4.053526173
50/50	57.20%	50.60%	807.02	4.317000107	37.60%	31.80%	768.73	5.044822155	66.20%	66.50%	1139.43	4.978720615
60/40	53.40%	50.70%	971.31	5.195638237	40.30%	30.50%	964.60	6.330227064	65.60%	64.30%	1394.8	6.094555624
70/30	51.60%	51.70%	1125.54	6.020862309	40.10%	30.90%	1134.57	7.44566216	62.90%	62.70%	1800.32	7.866468583
80/20	53.80%	55.00%	1292.02	6.911415427	38.20%	34.90%	1239.22	8.132432078	66.50%	64.40%	2565.95	11.21187626
90/10	55.10%	52.70%	1462.15	7.821493527	41.00%	32.90%	1408.17	9.241173382	61.00%	60.60%	2141.72	9.35821026

0.9 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	32.90%	32.83%	466.21	1	27.10%	25.70%	419.44	1	55.53%	54.69%	586.62	1
3	63.84%	60.64%	1194.91	2.563029556	41.07%	34.33%	939.86	2.240749571	76.47%	75.49%	1604.77	2.735621015
6	97.70%	93.92%	1912.5	4.102228609	79.98%	44.47%	1455.1	3.469149342	87.69%	82.62%	3135.05	5.344260339
11	100.00%	99.57%	3197.91	6.859376676	99.36%	47.57%	2168.83	5.170775319				0
21	100.00%	99.88%	5638.78	12.09493576	100.00%	59.37%	2805.16	6.691043296	100.00%	85.79%	802.31	1.367682657
41	100.00%	99.83%	8275.24	17.75092681	100.00%	44.60%	359.14	0.856236873				0
81	100.00%	99.71%	7231.37	15.51097145	100.00%	65.07%	2979.4	7.103280565				0
161	100.00%	99.81%	5170.91	11.09137513	100.00%	43.70%	326.44	0.778275763				0

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	60.95%	47.74%	263.54	1	64.67%	25.31%	236.80	1	72.46%	69.68%	252.91	1
20/80	54.79%	49.12%	475.90	1.805797981	46.50%	27.89%	364.99	1.625802365	69.52%	67.46%	468.95	1.854216915
30/70	54.84%	51.03%	615.62	2.33596418	42.93%	30.50%	525.44	2.218918819	67.07%	65.47%	687.48	2.718279923
40/60	54.03%	51.58%	719.11	2.726555992	39.53%	29.68%	704.00	2.973972973	67.60%	66.76%	918.19	3.622593017
50/50	54.13%	51.89%	899.68	3.413827123	39.19%	31.91%	857.49	3.621157095	69.76%	69.23%	1162.38	4.5960223
60/40	52.94%	50.55%	1095.04	4.155118768	37.90%	31.70%	976.64	4.124324324	70.16%	69.31%	1401.9	5.543078565
70/30	51.60%	49.36%	1269.39	4.816688169	37.95%	32.82%	1156.91	4.885599662	69.89%	69.08%	1606.55	6.352259697
80/20	52.79%	50.78%	1482.74	5.626242696	37.32%	32.80%	1376.57	5.813217905	69.02%	68.51%	1859.04	7.350599027
90/10	54.31%	51.86%	1641.53	6.228769826	36.79%	33.60%	1535.94	6.486233108	67.21%	67.00%	2056.75	8.132339567

0.8 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	30.34%	30.39%	527.96	1	28.30%	27.93%	372.12	1	57.76%	56.75%	485.41	1
3	62.25%	58.63%	1175.6	2.2268384	40.02%	34.53%	710.75	1.91000215	75.84%	75.20%	1183.63	2.438412588
6	97.61%	94.21%	1832.81	3.471494053	76.33%	44.50%	1185.62	3.186122756	86.53%	81.64%	2265.44	4.667064955
11	100.00%	99.51%	3216.18	6.091711493	99.02%	59.40%	1879.43	5.050601956	99.96%	87.08%	4152.17	8.553844089
21	100.00%	99.84%	4801.84	9.095082961	100.00%	66.67%	2673.72	7.18510158	100.00%	85.01%	692.77	1.427185266
41	100.00%	99.06%	5192.48	8.834987499	100.00%	58.33%	2560.63	6.881194238	100.00%	85.19%	949.1	1.955254321
81	100.00%	98.51%	4386.52	8.308432457	100.00%	56.43%	2617.64	7.034397506	100.00%	86.34%	2132.22	4.392616551
161	99.99%	98.07%	4493.53	8.511118267	100.00%	57.53%	2626.75	7.058878856	100%	85.84%	1368.11	2.818462743

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	59.01%	46.60%	147.59	1	66.13%	26.73%	170.28	1	72.67%	69.37%	246.64	1
20/80	56.23%	49.56%	257.96	1.747814893	47.30%	27.73%	257.70	1.513389711	69.54%	67.92%	437	1.779026217
30/70	53.99%	50.53%	370.31	2.509045328	41.78%	30.08%	359.64	2.11205074	68.87%	67.96%	636.22	2.59005048
40/60	51.44%	48.44%	499.13	3.38186869	40.90%	31.92%	471.25	2.767550587	71.10%	70.00%	808.81	3.292664061
50/50	54.23%	51.40%	623.41	4.226931161	39.21%	32.15%	567.69	3.333861875	70.03%	69.46%	1019.57	4.150667644
60/40	52.81%	50.52%	753.73	5.106917813	38.27%	31.57%	800.28	4.699788584	69.24%	68.69%	1224.74	4.985914346
70/30	54.88%	53.08%	896.3	6.072904668	37.98%	32.84%	970.84	5.701622434	68.79%	67.88%	1504.61	6.125264615
80/20	52.69%	50.20%	1115.7	7.559455248	36.57%	32.87%	1136.24	6.672774254	67.59%	66.81%	1744.2	7.100635076
90/10	52.71%	52.09%	1195.19	8.098041873	38.73%	36.20%	0.002125910265		66.39%	65.31%	1988.75	8.096197688

0.7 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	31.75%	30.84%	278.12	1	29.05%	25.90%	409.34	1	60.01%	58.90%	481.79	1
3	63.06%	59.38%	693.2	2.492449302	38.98%	33.83%	783.66	1.914447647	76.11%	74.71%	1132.24	2.350696532
6	96.50%	92.62%	1187.07	4.268193586	75.43%	45.60%	1255.43	3.06696145	86.60%	83.98%	2098.33	4.355279271
11	100.00%	99.51%	2130.35	7.659822098	99.07%	59.40%	1969.95	4.812503054	97.97%	87.91%	3358.15	6.970152971
21	100.00%	99.81%	3309.17	11.8683533	100.00%	66.43%	2691.15	6.57436361	99.01%	87.01%	4921.22	10.21445028
41	100.00%	98.64%	3431.98	12.33992521	100.00%	57.30%	2153.26	5.260321493	98.40%	84.11%	6443.61	13.37431246
81	99.99%	98.33%	3584.26	12.88745865	99.99%	56.23%	1974.28	4.822081057	98.36%	83.94%	6661.44	13.8264389
161	99.99%	98.41%	4043.47	14.53858047	99.98%	57.03%	1979.72	4.836370743	98.26%	83.96%	6646.57	13.79349924

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	61.29%	47.06%	143.82	1	62.53%	25.73%	157.08	1	75.95%	73.75%	216.7	1
20/80	55.64%	50.28%	265.96	1.849256014	45.47%	27.42%	233.13	1.484148205	68.76%	68.26%	379.75	1.752422704
30/70	52.06%	48.16%	377.19	2.622653317	40.87%	30.22%	323.55	2.059778457	70.48%	69.82%	552.26	2.548500231
40/60	52.37%	50.13%	488.03	3.393338896	37.87%	30.58%	413.22	2.630340072	69.96%	68.90%	721.18	3.328011075
50/50	53.31%	51.02%	585.04	4.067862606	36.56%	31.63%	504.62	3.212503183	68.93%	68.21%	903.23	4.168112598
60/40	52.43%	50.35%	730.88	5.08190794	36.94%	31.20%	688.20	4.381207028	68.64%	68.23%	1086.53	5.013982464
70/30	53.02%	50.74%	823.57	5.726394104	37.30%	31.80%	813.31	5.178047163	71.01%	70.11%	1331.39	6.143931703
80/20	54.54%	52.08%	937.27	6.516965652	37.61%	32.40%	1002.65	6.383053221	67.33%	65.94%	1527.18	7.047438856
90/10	54.17%	52.73%	1119.41	7.783409818	36.87%	33.27%	1174.71	7.47841864	69.01%	68.24%	1754.54	8.096631287

0.6 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	31.85%	31.29%	234.43	1	27.50%	24.93%	269.25	1	53.37%	52.49%	450.17	1
3	61.26%	58.66%	566.57	2.416798191	38.05%	32.37%	544.96	2.023992572	79.64%	78.64%	1075.5	2.389097452
6	96.68%	93.13%	1062.42	4.531928507	70.88%	43.23%	901.54	3.348337976	86.64%	84.54%	2026.35	4.501299509
11	99.99%	99.54%	1917.9	8.181120164	98.30%	57.67%	1324.11	4.917771588	97.29%	87.86%	3528.88	7.838994158
21	100.00%	99.80%	2906.24	12.3970416	99.98%	65.73%	1709.57	6.348377902	98.28%	86.86%	5351.4	11.88750916
41	99.98%	98.87%	2865.05	12.22134539	99.97%	56.20%	1605.26	5.961968431	96.95%	83.64%	6782.98	15.06759669
81	99.94%	98.20%	2715.09	11.58166617	99.90%	55.00%	1598.15	5.935561746	96.98%	83.92%	6858.21	15.23471133
161	99.99%	99.99%	2703.82	11.5335912	99.95%	58.57%	1675.27	6.221987001	96.74%	83.54%	7109.34	15.79258725

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	57.83%	45.57%	120.54	1	65.47%	26.09%	141.86	1	73.79%	71.39%	208.37	1
20/80	54.34%	48.13%	213.37	1.770117803	43.87%	27.38%	215.64	1.52009023	70.43%	69.07%	355.34	1.705331862
30/70	52.30%	49.20%	302.05	2.505807201	41.38%	30.04%	292.15	2.059424785	71.75%	70.57%	508.72	2.441426309
40/60	54.40%	51.58%	404.07	3.352165256	38.18%	31.10%	370.60	2.612434795	70.82%	70.00%	637.91	3.061429188
50/50	51.53%	49.05%	505.99	4.197693712	36.95%	31.44%	454.61	3.204638376	70.76%	70.07%	795.97	3.819983683
60/40	52.36%	49.40%	596.77	4.950604712	35.94%	30.25%	609.40	4.295784676	69.95%	68.99%	956.76	4.591639871
70/30	53.66%	52.13%	700.36	5.81018749	36.32%	36.32%	766.60	5.404596715	70.59%	69.99%	1220.4	5.856889198
80/20	51.57%	49.42%	809.03	6.711713954	37.22%	31.60%	827.15	5.830748625	70.08%	68.99%	1392.92	6.684839468
90/10	51.62%	50.53%	908	7.532769205	36.36%	33.67%	949.8	6.695333427	70.04%	69.21%	1566.34	7.517108989

0.5 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	31.15%	30.21%	206.5	1	27.27%	24.63%	240.5	1	55.53%	54.59%	342.47	1
3	59.56%	56.63%	499.57	2.419225182	36.67%	31.87%	456.3	1.897297297	79.57%	78.83%	924.78	2.700324116
6	96.36%	92.96%	938.5	4.544794189	68.92%	41.00%	727.79	3.026153846	83.94%	79.58%	1746.27	5.099045172
11	99.98%	99.34%	1659.61	8.0368523	97.70%	57.13%	1044.25	4.341995842	99.59%	85.16%	1716.48	5.01205945
21	100.00%	99.81%	2523.44	12.22004843	99.96%	63.83%	1355.99	5.638212058	99.94%	85.45%	703.15	2.053172541
41	99.94%	98.28%	2347.24	11.36677966	99.72%	54.57%	1278.25	5.314968815	99.97%	85.51%	853.84	2.493181885
81	99.90%	98.15%	2381.98	11.53501211	99.72%	54.77%	1275.08	5.301787942	99.85%	85.14%	622.48	1.817619062
161	99.91%	98.12%	2230.1	10.79951574	99.70%	54.67%	1295.56	5.386943867	99.97%	85.55%	875.83	2.557391888

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	56.90%	45.88%	101.17	1	56.80%	25.09%	129.25	1	72.56%	70.40%	186.04	1
20/80	53.27%	48.23%	171.25	1.692695463	41.47%	26.73%	184.86	1.430251451	70.22%	69.24%	308.37	1.657540764
30/70	52.69%	49.57%	254.13	2.511910645	38.64%	27.98%	257.73	1.994042553	76.23%	75.32%	441.72	2.374328101
40/60	51.88%	49.36%	341.33	3.373826233	39.90%	31.66%	323.03	2.49926499	69.09%	68.38%	549.19	2.95199957
50/50	52.04%	49.91%	423.37	4.184738559	36.09%	29.61%	371.36	2.873191489	71.81%	71.17%	679.12	3.650397794
60/40	51.77%	50.31%	504.7	4.988632994	36.36%	29.50%	518.21	4.009361702	69.72%	68.99%	815.04	4.380993335
70/30	52.42%	50.31%	595.7	5.888109123	34.89%	30.80%	604.11	4.673965184	66.91%	66.17%	1022.32	5.495162331
80/20	50.34%	48.28%	684.79	6.768706138	36.24%	30.70%	703.98	5.446653772	70.69%	69.65%	1188.88	6.272195527
90/10	54.51%	52.01%	774.95	7.659879411	35.35%	32.40%	803.15	6.213926499	69.54%	69.03%	1316.11	7.074338852

0.4 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	30.41%	30.23%	260.34	1	27.23%	26.20%	264.1	1	54.71%	53.75%	325.71	1
3	60.54%	57.70%	542.63	2.084312822	37.35%	32.53%	444.92	1.6846649	79.25%	78.08%	711.12	2.183291885
6	95.46%	91.28%	966.06	3.710762849	45.87%	45.87%	691.94	2.62092427	84.97%	87.51%	2271.69	6.974599613
11	99.93%	99.15%	1681.95	6.460589998	96.53%	58.27%	1015.72	3.845967437	95.14%	87.58%	1990.23	6.110435664
21	99.99%	99.67%	2377.87	9.133709764	99.68%	63.80%	1307.81	4.951950019	95.48%	86.09%	2973.2	9.128365724
41	99.78%	98.01%	2208.32	8.47476377	99.92%	54.70%	1235.51	4.6791908	93.46%	82.82%	3592.51	11.02978109
81	99.69%	97.08%	2200.68	8.45309793	98.93%	55.43%	1250.06	4.733282847	93.15%	82.94%	4019.1	12.33950447
161	99.76%	97.39%	2219.52	8.525466697	98.92%	54.23%	1249.74	4.732071185	93.25%	93.25%	4619.06	14.18151116

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	58.29%	45.44%	94.31	1	58.80%	28.10%	129.11	1	76.46%	75.31%	185.68	1
20/80	54.11%	48.40%	150.52	1.596013148	45.20%	29.07%	184.13	1.426148246	72.45%	71.31%	265.26	1.428558616
30/70	51.53%	48.51%	206.72	2.191920263	38.02%	27.69%	235.89	1.827046704	69.81%	68.99%	400.64	2.157690651
40/60	52.02%	49.60%	276.63	2.933199024	36.02%	29.33%	292.00	2.261637363	73.68%	72.64%	475.08	2.558595433
50/50	50.97%	49.52%	355.36	3.767999152	36.56%	31.17%	321.80	2.4924483	70.70%	69.71%	580.53	3.126507971
60/40	52.88%	51.01%	428.83	4.547025766	34.42%	30.58%	463.67	3.591278755	74.62%	73.75%	678.69	3.655159414
70/30	52.92%	50.77%	496.57	5.265295303	34.81%	30.27%	523.43	4.054139881	68.88%	68.21%	882.52	4.752908229
80/20	52.38%	50.85%	574.95	6.096384265	37.62%	33.63%	600.16	4.648436315	69.95%	69.29%	990.21	5.332884533
90/10	49.68%	47.85%	656.83	6.96458488	35.42%	31.07%	670.21	5.190999923	74.60%	73.79%	1123.77	6.052186558

0.3 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	29.73%	29.27%	224.72	1	27.39%	26.63%	244.83	1	53.08%	52.34%	257.75	1
3	60.03%	57.70%	420.62	1.871751513	35.71%	31.53%	377.84	1.543274925	78.06%	76.69%	506.62	1.965548012
6	94.88%	91.87%	722.39	3.214422642	65.71%	45.63%	559.65	2.285871829	85.51%	84.29%	888.22	3.446052376
11	99.80%	98.83%	1270.99	5.655882876	93.55%	55.30%	791.34	3.232201936	93.54%	87.18%	1520.09	5.897536372
21	99.97%	99.52%	1857.73	8.266865433	98.62%	61.67%	1004.02	4.100886329	93.57%	85.55%	2176.03	8.442405432
41	99.30%	96.42%	1708.29	7.601680093	96.54%	52.00%	938.43	3.832986154	91.10%	82.89%	2685.04	10.41722599
81	99.39%	96.97%	1694.15	7.538937344	96.38%	53.00%	932.45	3.808561042	91.05%	82.81%	2805.86	10.88597478
161	99.31%	96.97%	1765.65	7.857111072	95.85%	51.50%	1030.78	4.21018666	90.84%	83.04%	2676.72	10.38494665

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	54.36%	43.73%	144.57	1	53.00%	26.20%	154.19	1	74.53%	73.46%	217.52	1
20/80	51.52%	46.90%	220.90	1.527979525	41.27%	27.39%	217.61	1.411310721	73.18%	72.64%	327.71	1.506574108
30/70	52.32%	49.54%	294.65	2.038113025	39.13%	29.33%	286.85	1.86036708	71.40%	70.49%	439.45	2.020273998
40/60	48.81%	45.42%	358.45	2.479421733	39.77%	31.84%	345.57	2.241195927	70.55%	70.03%	548.38	2.521055535
50/50	48.44%	46.33%	444.07	3.071660787	38.99%	33.18%	403.84	2.619106297	68.40%	67.64%	658.07	3.025331004
60/40	49.91%	48.29%	468.75	3.242373937	36.41%	32.83%	491.93	3.190414424	70.85%	70.09%	765.19	3.517791467
70/30	50.31%	48.47%	531.63	3.677318946	37.18%	31.51%	577.89	3.747908425	69.07%	68.40%	885.94	4.072912836
80/20	48.55%	46.98%	594.95	4.115307464	33.89%	30.77%	643.58	4.173941241	73.57%	73.07%	954.14	4.386447223
90/10	50.50%	48.77%	659.67	4.562979871	38.65%	36.00%	716.83	4.649004475	71.52%	70.79%	1035.56	4.760757631

0.2 Batch AdaBoost

Data set: Sign Language MNIST

Tree Depth	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Chinese MNIST Training	Chinese MNIST Testing	Training Time: (Seconds)	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time: (Seconds)	Relative Training Time:
1	32.73%	31.63%	171.2	1	27.27%	25.70%	227.49	1	47.09%	46.21%	241.71	1
3	58.97%	56.84%	371.29	2.16875	33.75%	31.43%	323.79	1.423315311	78.67%	77.77%	493.4	2.041289148
6	92.24%	88.09%	554.73	3.240245327	60.96%	43.93%	437.71	1.924064575	86.16%	84.50%	864.19	3.575317529
11	99.52%	98.27%	959.89	5.606834112	89.89%	54.57%	582.65	2.561211482	91.86%	86.87%	1436.02	5.941086426
21	99.74%	99.12%	1287.49	7.520385514	94.89%	57.33%	754.16	3.315134731	90.77%	84.63%	1633.56	6.758346779
41	97.93%	94.53%	1309.25	7.647488318	89.04%	49.27%	638.49	2.806672821	88.17%	81.91%	1928.16	7.977162716
81	97.73%	93.59%	1334.17	7.793049065	88.78%	49.40%	622.72	2.737351092	94.34%	83.96%	235.11	0.972694553
161	97.98%	94.44%	1280.74	7.480957944	88.39%	49.23%	645.3	2.836608203	95.59%	84.76%	428.34	1.772123619

Train/Test Ratio	Sign Language MNIST Training	Sign Language MNIST Testing	Training Time:	Relative Training Time:	Chineses MNIST Training	Chinese MNIST Testing	Training Time:	Relative Training Time:	Fashion MNIST Training	Fashion MNIST Testing	Training Time:	Relative Training Time:
10/90	48.53%	40.72%	118.71	1	47.67%	24.44%	163.94	1	75.10%	73.99%	195.12	1
20/80	50.31%	46.07%	188.26	1.58588156	41.33%	28.78%	217.14	1.324508967	72.62%	71.60%	290.45	1.488571136
30/70	49.10%	46.30%	236.76	1.994440232	41.27%	32.78%	261.66	1.596071734	75.23%	74.79%	371.08	1.901804018
40/60	50.20%	50.20%	187.62	1.58049027	39.80%	32.53%	192.47	1.174027083	72.13%	71.25%	292.23	1.497693727
50/50	51.63%	49.82%	246.19	2.073877517	40.93%	34.43%	202.86	1.237429928	74.90%	74.01%	345.01	1.768193932
60/40	50.72%	49.05%	271.32	2.285569876	39.19%	33.90%	309.49	1.887824814	70.75%	70.04%	472.52	2.421689217
70/30	53.02%	51.82%	427.98	3.605256507	39.86%	35.44%	445.82	2.719409954	69.02%	68.03%	537.68	2.755937556
80/20	51.29%	49.73%	495.6	4.17487986	37.80%	35.90%	486.47	3.028364036	70.73%	69.69%	599.2	3.070930709
90/10	49.73%	50.01%	538.76	4.538455059	37.75%	35.40%	554.16	3.382261071	70.79%	70.09%	667.78	3.422406724

0.1 Batch AdaBoost

Data set: Sign Language MNIST

| Tree Depth | Sign Language MNIST Training | Sign Language MNIST Testing | Training Time: (Seconds) | Relative Training Time: | Chinese MNIST Training | Chinese MNIST Testing | Training Time: (Seconds