

Fitting each train data clustered by train labels and then transform original train and test data.

F-test 75%, PCA 64

label	0	1	2	3	4	5	6	7	8	9
<b>Train accuracy</b>	0.9964	0.9965	0.9962	0.9962	0.9965	0.9963	0.9964	0.9966	0.9965	0.9964
<b>Test accuracy</b>	0.9851	0.9847	0.9854	0.9854	0.9850	0.9858	0.9849	0.9851	0.9851	0.9852

F-test 75%, PCA 32

label	0	1	2	3	4	5	6	7	8	9
<b>Train accuracy</b>	0.9978	0.9977	0.9976	0.9976	0.9878	0.9975	0.9976	0.9978	0.9978	0.9977
<b>Test accuracy</b>	0.9832	0.9819	0.9823	0.9821	0.9820	0.9824	0.9822	0.9819	0.9823	0.9822

F-test 75%, PCA 128

label	0	1	2	3	4	5	6	7	8	9
<b>Train accuracy</b>	0.9920	0.9921	0.9917	0.9919	0.9921	0.9921	0.9918	0.9920	0.9920	0.9920
<b>Test accuracy</b>	0.9829	0.9829	0.9830	0.9830	0.9833	0.9834	0.9828	0.9828	0.9830	0.9831

F-test 75%, PCA 256

label	0	1	2	3	4	5	6	7	8	9
<b>Train accuracy</b>	0.9840	0.9845	0.9839	0.9838	0.9841	0.9842	0.9838	0.9843	0.9840	0.9838
<b>Test accuracy</b>	0.9772	0.9781	0.9776	0.9774	0.9779	0.9774	0.9775	0.9772	0.9770	0.9773

Label "0" is "0", the rest is "1" (F-test 75%) for "sample" in the code, train labels and test labels are still from "0" to "9"

PCA	32		64		128		256	
label	0	1	0	1	0	1	0	1
<b>Train accuracy</b>	0.9978	0.9978	0.9964	0.9966	0.9919	0.9920	0.9840	0.9842
<b>Test accuracy</b>	0.9823	0.9820	0.9851	0.9849	0.9830	0.9832	0.9769	0.9773

Label "0" is "0", the rest is "1" (F-test 75%) for "sample", train labels and test labels.

PCA	32		64		128		256	
label	0	1	0	1	0	1	0	1
<b>Train accuracy</b>	0.9978	0.9978	0.9964	0.9966	0.9919	0.9920	0.9840	0.9840
<b>Test accuracy</b>	0.9823	0.9820	0.9851	0.9850	0.9827	0.9833	0.9771	0.9771

classes	2	3	4	5	6	7	8	9	10
<b>Train accuracy</b>	1.0000	0.9997	0.9995	0.9993	0.9991	0.9987	0.9981	0.9978	0.9966
<b>Test accuracy</b>	0.9991	0.9968	0.9966	0.9965	0.9939	0.9923	0.9904	0.9890	0.9848

classes	(7,9)	(5,8)	(1,6)
<b>Train accuracy</b>	0.9982	0.9994	1.0000
<b>Test accuracy</b>	0.9917	0.9968	0.9990
<b>cluster</b>	7	5	1
<b>Train accuracy</b>	0.9982	0.9993	1.0000
<b>Test accuracy</b>	0.9917	0.9957	0.9986
<b>cluster</b>	9	8	6
<b>Train accuracy</b>	0.9983	0.9994	1.0000
<b>Test accuracy</b>	0.9921	0.9962	0.9990

ratio	1.2	1.5	2	3	5	10
<b>Number of SVM</b>	15×2	25×2	32×2	37×2	38×2	40×2
<b>Retesting number</b>	23	55	102	172	239	353
<b>Correct in retest</b>	8	25	54	102	146	238
<b>Making correct</b>	9	13	15	15	21	19
<b>Making wrong</b>	3	7	9	13	27	40
<b>Test accuracy</b>	0.9855	0.9855	0.9855	0.9851	0.9843	0.9828