

1. Iris Dataset

In the Iris Dataset, there are 3 classes of data points: *Setosa*, *Versicolor*, and *Virginica*.

Occurrence of Misclassification: *Setosa* VS *Versicolor*

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50
dim=2	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	-	-
dim=3	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	-	-

Occurrence of Misclassification: *Setosa* VS *Virginica*

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50
dim=2	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	-	-
dim=3	0/50	0/50	0/50	0/50	0/50	0/50	0/50	0/50	-	-

Occurrence of Misclassification: *Versicolor* VS *Virginica*

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	4/50	3/50	2/50	0/50	3/50	1/50	2/50	1/50	2/50	1/50
dim=2	2/50	1/50	2/50	1/50	2/50	1/50	2/50	1/50	-	-
dim=3	2/50	1/50	2/50	1/50	2/50	1/50	2/50	1/50	-	-

Occurrence of Misclassification: Multi-SLDA VS LDA

	SKL-3 (Multi-SLDA)			LDA		
	Type I	Type II	Type III	Type I	Type II	Type III
dim=1	0/50	2/50	2/50	0/50	2/50	1/50
dim=2	0/50	3/50	0/50	0/50	2/50	1/50
dim=3	0/50	2/50	1/50	-	-	-

2. Banknote Authentication Dataset

Occurrence of Misclassification

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	38/762	16/610	20/762	0/610	20/762	0/610	23/762	1/610	32/762	0/610
dim=2	23/762	0/610	20/762	0/610	23/762	0/610	23/762	0/610	-	-
dim=3	23/762	0/610	23/762	0/610	23/762	0/610	23/762	0/610	-	-

3. Climate Model Simulation Crashes Authentication Dataset

Occurrence of Misclassification

	KL-1	KL-2	SKL	H	LDA
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	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	2/46	82/494	2/46	64/494	2/46	79/494	2/46	65/494	18/46	1/494
dim=2	2/46	59/494	1/46	59/494	2/46	54/494	1/46	51/494	-	-
dim=3	2/46	57/494	1/46	47/494	1/46	37/494	1/46	48/494	-	-

4. Seeds Dataset

In this dataset, there are 3 classes of different seeds.

Occurrence of Misclassification: Class 1 VS Class 2

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	1/70	7/70	2/70	4/70	2/70	4/70	1/70	0/70	2/70	6/70
dim=2	2/70	4/70	2/70	4/70	2/70	4/70	1/70	0/70	-	-
dim=3	2/70	1/70	2/70	2/70	2/70	2/70	1/70	1/70	-	-

Occurrence of Misclassification: Class 1 VS Class 3

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	5/70	4/70	10/70	1/70	10/70	1/70	2/70	2/70	5/70	5/70
dim=2	7/70	3/70	3/70	1/70	7/70	3/70	3/70	1/70	-	-
dim=3	3/70	1/70	4/70	1/70	4/70	1/70	3/70	1/70	-	-

Occurrence of Misclassification: Class 2 VS Class 3

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	0/70	0/70	0/70	0/70	0/70	0/70	0/70	0/70	0/70	0/70
dim=2	0/70	0/70	0/70	0/70	0/70	0/70	0/70	0/70	-	-
dim=3	0/70	0/70	0/70	0/70	0/70	0/70	0/70	0/70	-	-

Occurrence of Misclassification: Multi-SLDA VS LDA

	SKL-3 (Multi-SLDA)			LDA		
	Type I	Type II	Type III	Type I	Type II	Type III
dim=1	17/70	9/70	1/70	4/70	6/70	3/70
dim=2	16/70	7/70	4/70	4/70	6/70	3/70
dim=3	7/70	1/70	2/70	-	-	-

5. MAGIC Gamma Telescope Dataset

Occurrence of Misclassification

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	510/ 12332	4338/ 6688	509/ 12332	4330/ 6688	511/ 12332	4336/ 6688	510/ 12332	4330/ 6688	1163/ 12332	2963/ 6688
dim=2	599/ 12332	3777/ 6688	585/ 12332	3632/ 6688	599/ 12332	3760/ 6688	585/ 12332	3659/ 6688	-	-

dim=3	610/ 12332	3892/ 6688	912/ 12332	2922/ 6688	607/ 12332	3877/ 6688	888/ 12332	2877/ 6688	-	-
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6. HTRU2 Dataset

Occurrence of Misclassification

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	232/ 16259	327/ 1639	1118/ 16259	161/ 1639	232/ 16259	327/ 1639	427/ 16259	154/ 1639	72/ 16259	381/ 1639
dim=2	297/ 16259	218/ 1639	1128/ 16259	142/ 1639	282/ 16259	216/ 1639	686/ 16259	138/ 1639	-	-
dim=3	319/ 16259	205/ 1639	424/ 16259	237/ 1639	335/ 16259	201/ 1639	345/ 16259	199/ 1639	-	-

7. Abalone Dataset

In this dataset, there are 3 classes of data points: 1-Male, 2-Female, and 3-Infant.

Occurrence of Misclassification: Male VS Female

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	1180/ 1528	213/ 1307	1176/ 1528	212/ 1307	1176/ 1528	212/ 1307	1178/ 1528	213/ 1307	407/ 1528	833/ 1307
dim=2	288/ 1528	1000/ 1307	288/ 1528	1001/ 1307	288/ 1528	1001/ 1307	289/ 1528	1000/ 1307	-	-
dim=3	320/ 1528	927/ 1307	343/ 1528	941/ 1307	320/ 1528	925/ 1307	320/ 1528	924/ 1307	-	-

Occurrence of Misclassification: Male VS Infant

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	210/ 1528	547/ 1342	626/ 1528	104/ 1342	622/ 1528	104/ 1342	567/ 1528	109/ 1342	363/ 1528	262/ 1342
dim=2	511/ 1528	152/ 1342	579/ 1528	125/ 1342	580/ 1528	127/ 1342	504/ 1528	147/ 1342	-	-
dim=3	502/ 1528	168/ 1342	549/ 1528	147/ 1342	502/ 1528	169/ 1342	496/ 1528	169/ 1342	-	-

Occurrence of Misclassification: Female VS Infant

	KL-1		KL-2		SKL		H		LDA	
	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II	Type I	Type II
dim=1	132/ 1307	567/ 1342	458/ 1307	104/ 1342	448/ 1307	104/ 1342	377/ 1307	128/ 1342	297/ 1307	206/ 1342
dim=2	325/ 1307	187/ 1342	476/ 1307	109/ 1342	332/ 1307	193/ 1342	312/ 1307	187/ 1342	-	-

dim=3	383/ 1307	145/ 1342	383/ 1307	145/ 1342	383/ 1307	144/ 1342	382/ 1307	149/ 1342	-	-
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Occurrence of Misclassification: Multi-SLDA VS LDA

	SKL-3 (Multi-SLDA)			LDA		
	Type I	Type II	Type III	Type I	Type II	Type III
dim=1	1457/1528	501/1307	104/1342	716/1528	868/1307	319/1342
dim=2	1030/1528	877/1307	128/1342	716/1528	868/1307	319/1342
dim=3	1423/1528	422/1307	191/1342	-	-	-