Summary of Classification Performance on All Data

2-class data (10 data)

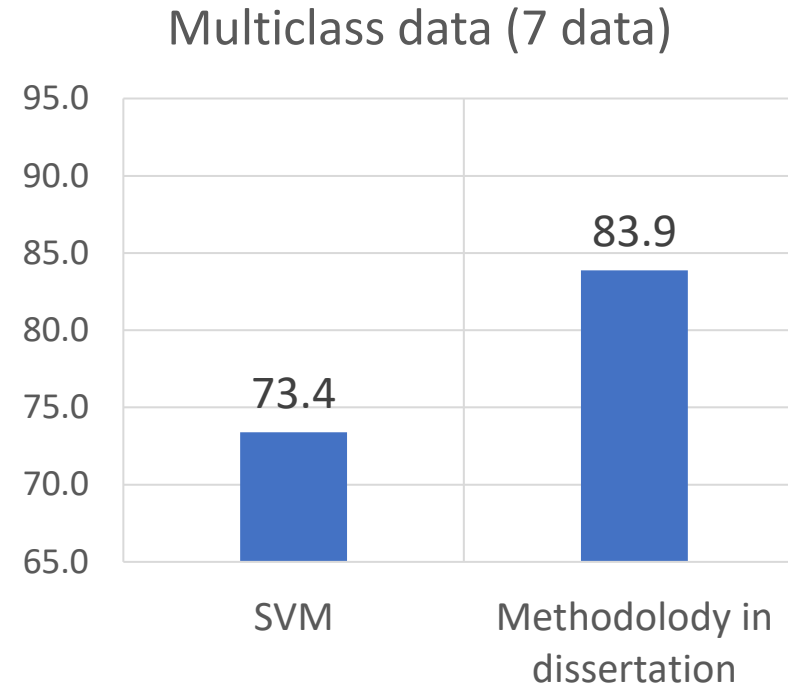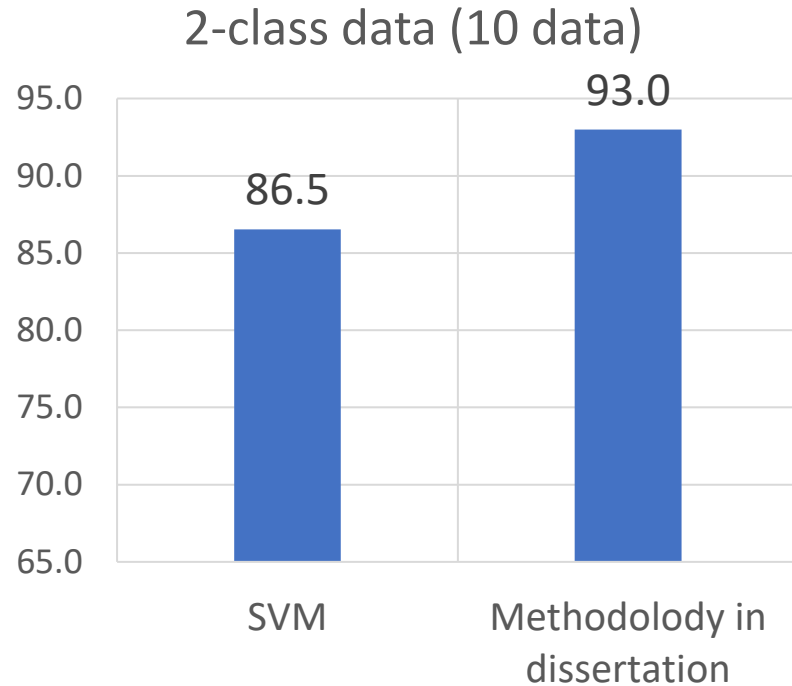### Multiclass data (7 data)

- **By applying the methodology in dissertation (SVM+BFS+FE),**

- **CCR is increased by 6.5% on 2-class data, on average.**

- **CCR is increased by 10.5% on multiclass data, on average.**

Classification Performance on 10 2-Class Data

Data	Number of Insrtances	Number of features	SVM			SVM+BFS				SVM+BFS+FE (Methodology in Dissertation)			
			Correct Classification Rate(%)	Number of used features	Feature reduction rate(%)	Correct Classification Rate(%)	Increase of CCR (%)	Number of used features	Feature reduction rate(%)	Correct Classification Rate(%)	Increase of CCR (%)	Number of used features	Feature reduction rate(%)
Ionosphere	351	33	94.0	33	0.0	94.6	0.6	13	60.6	100	6.0	4	87.9
German	1,000	20	76.3	17	15.0	77.1	0.8	15	25.0	95.7	19.4	8	60.0
Rookie	1,340	19	68.6	18	5.3	69.5	0.9	18	5.3	83.5	14.9	6	68.4
Diabetes	768	8	73.6	7	12.5	74.6	1.0	8	0.0	80.3	6.7	7	12.5
Sonar	208	60	86.3	43	28.3	86.3	0.0	37	38.3	86.8	0.5	6	90.0
Parkinson	195	22	87.7	20	9.1	92.8	5.1	6	72.7	93.3	5.6	8	63.6
Australian	690	14	84.5	10	28.6	86.1	1.6	6	57.1	93.2	8.7	14	0.0
Breast(diag)	569	30	97.5	28	6.7	97.9	0.4	18	40.0	98.6	1.1	4	86.7
Heart	270	14	100.0	14	0.0	100	0.0	1	92.9	100	0.0	1	92.9
Breast	683	9	96.9	8	11.1	97.4	0.5	6	33.3	98.5	1.6	2	77.8
Average	**607.4**	**22.9**	**86.5**	**19.8**	**11.7**	**87.6**	**1.1**	**12.8**	**42.5**	**93.0**	**6.5**	**6.0**	**64.0**

Classification Performance on 7 Multiclass data

Data	Number of classes	Number of Insrtances	Number of features	SVM	SVM+BFS+FE (Methodology in Dissertation)	
				Correct Classification Rate(%)	Correct Classification Rate(%)	Increase of CCR (%)
Iris	3	150	4	97.8	97.8	0.0
Contraceptive	3	1,473	9	36.9	67.2	30.3
Vehicle	4	846	18	67.6	81.0	13.4
Dermatology	6	358	34	93.8	95.6	1.8
Flare	6	1,389	12	58.7	79.1	20.4
Zoo	7	101	16	93.6	93.6	0.0
Soybean	15	266	35	65.3	72.8	7.5
Average	**6.3**	**654.7**	**18.3**	**73.4**	**83.9**	**10.5**