Transfer Learning Experiment for Strain *Leishmania major* from TS7

November 27, 2014

1 Experimental Stat Results for Setting Number 1:

- Target (Training) Dataset: Size=3 (3 Inactive + 0 Active)
- Testing Dataset: Size=1323 (1311 Inactive + 12 Active)
- In this experiment I did 3 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	?	1	0	0	0	0	0	0	0	0
NB	100	0	?	1	0	0	0	0	0	0	0	0
J48	100	0	?	1	0	0	0	0	0	0	0	0
SMO	100	0	?	1	0	0	0	0	0	0	0	0
IBk	100	0	?	1	0.16	0.16	66.66	66.66	0	0	0	0

But when evaluating using the test set, the results were as follows:

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	99.92	0.07	0.99	0.95	0	0.02	0.49	13.5	0.92	1	0.96	0
NB	99.09	0.9	0.5	0	0	0.09	4.41	44.67	0	0	0	0
J48	99.09	0.9	0.5	0	0	0.09	4.41	44.67	0	0	0	0
SMO	99.09	0.9	0.5	0	0	0.09	4.41	44.67	0	0	0	0
IBk	99.09	0.9	0.5	0	0.09	0.12	47.86	58.75	0	0	0	0

2 Experimental Stat Results for Setting Number 2:

- Target (Training) Dataset:Size=6 (6 Inactive + 0 Active)
- Testing Dataset: Size=1320 (1308 Inactive + 12 Active)
- In this experiment I did 3 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	?	1	0	0	0	0	0	0	0	0
NB	100	0	?	1	0	0	0	0	0	0	0	0
J48	100	0	?	1	0	0	0	0	0	0	0	0
SMO	100	0	?	1	0	0	0	0	0	0	0	0
IBk	100	0	?	1	0.05	0.05	33.33	33.33	0	0	0	0

But when evaluating using the test set, the results were as follows:

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	99.84	0.15	0.99	0.91	0	0.03	1.08	24.52	0.91	0.91	0.91	0
NB	99.09	0.9	0.5	0	0	0.09	6.89	63.64	0	0	0	0
J48	99.09	0.9	0.5	0	0	0.09	6.89	63.64	0	0	0	0
SMO	99.09	0.9	0.5	0	0	0.09	6.89	63.64	0	0	0	0
IBk	99.09	0.9	0.5	0	0.03	0.09	30.17	65.05	0	0	0	0

3 Experimental Stat Results for Setting Number 3:

- Target (Training) Dataset: Size=12 (12 Inactive + 0 Active)
- Testing Dataset: Size=1314 (1302 Inactive + 12 Active)
- In this experiment I did 3 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	?	1	0	0	0	0	0	0	0	0
NB	100	0	?	1	0	0	0	0	0	0	0	0
J48	100	0	?	1	0	0	0	0	0	0	0	0
SMO	100	0	?	1	0	0	0	0	0	0	0	0
IBk	100	0	?	1	0.02	0.02	23.8	23.8	0	0	0	0

But when evaluating using the test set, the results were as follows:

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	99.92	0.07	0.99	0.95	0	0.02	1.29	25.67	0.92	1	0.96	0
NB	99.08	0.91	0.5	0	0	0.09	11.52	84.04	0	0	0	0
J48	99.08	0.91	0.5	0	0	0.09	11.52	84.04	0	0	0	0
SMO	99.08	0.91	0.5	0	0	0.09	11.52	84.04	0	0	0	0
IBk	99.08	0.91	0.5	0	0.02	0.09	31.5	83.88	0	0	0	0

4 Experimental Stat Results for Setting Number 4:

- Target (Training) Dataset: Size=25 (24 Inactive + 1 Active)
- Testing Dataset: Size=1301 (1290 Inactive + 11 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	1	1	0	0	0	0	1	1	1	0
NB	96	4	0.5	0	0.04	0.2	35.19	96.7	0	0	0	0.04
J48	96	4	0.04	0	0.07	0.2	69.68	98.79	0	0	0	0.04
SMO	96	4	0.5	0	0.04	0.2	35.19	96.7	0	0	0	0.04
IBk	96	4	0.7	0	0.04	0.19	42.28	95.93	0	0	0	0.04

But when evaluating using the test set, the results were as follows:

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	99.92	0.07	0.99	0.95	0	0.02	1.28	26	0.91	1	0.95	0
NB	99.15	0.84	0.5	0	0	0.09	10.4	81.62	0	0	0	0
J48	99.15	0.84	0.5	0	0.04	0.09	58.78	85.97	0	0	0	0
SMO	99.92	0.07	0.95	0.95	0	0.02	0.94	24.61	1	0.9	0.95	0
IBk	99.15	0.84	0.9	0	0.01	0.07	18.25	68.47	0	0	0	0

5 Experimental Stat Results for Setting Number 5:

- Target (Training) Dataset: Size=50 (48 Inactive + 2 Active)
- Testing Dataset: Size=1276 (1266 Inactive + 10 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	1	1	0	0.04	6.61	22.41	1	1	1	0
NB	94	6	0.09	-0.03	0.06	0.24	62.38	122.14	0	0	0	0.06
J48	92	8	0.87	-0.05	0.06	0.23	72.09	118.1	0	0	0	0.08
SMO	98	2	0.75	0.65	0.02	0.14	20.79	70.51	1	0.5	0.66	0.02
IBk	96	4	0.75	0	0.04	0.18	41.68	89.97	0	0	0	0.04

But when evaluating using the test set, the results were as follows:

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	1	1	0	0	0.05	0.78	1	1	1	0
NB	98.04	1.95	0.99	0.41	0.01	0.13	30.2	137.27	0.27	0.9	0.41	0.01
J48	98.43	1.56	0.84	0.4	0.01	0.09	20.21	93.03	0.29	0.7	0.41	0.01
SMO	99.68	0.31	0.94	0.81	0	0.05	4.85	55.27	0.75	0.9	0.81	0
IBk	99.21	0.78	0.79	0	0.01	0.07	16	71.73	0	0	0	0

6 Experimental Stat Results for Setting Number 6:

- Target (Training) Dataset: Size=100 (96 Inactive + 4 Active)
- Testing Dataset: Size=1226 (1218 Inactive + 8 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	1	1	0	0	0	0	1	1	1	0
NB	94	6	0.99	0.54	0.05	0.24	67.95	121.59	0.4	1	0.57	0.06
J48	96	4	0.74	0.47	0.03	0.18	41.6	91.64	0.5	0.5	0.5	0.04
SMO	100	0	1	1	0	0	0	0	1	1	1	0
IBk	96	4	0.87	0	0.03	0.15	37.07	77.62	0	0	0	0.04

But when evaluating using the test set, the results were as follows:

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	99.91	0.08	0.99	0.94	0	0.03	2.01	33.07	0.88	1	0.94	0
NB	98.12	1.87	0.99	0.4	0.01	0.13	34.18	150.43	0.25	1	0.41	0.01
J48	99.02	0.97	0.87	0.49	0	0.08	16.63	92.2	0.37	0.75	0.5	0
SMO	99.59	0.4	0.87	0.7	0	0.06	7.42	70.14	0.66	0.75	0.7	0
IBk	99.34	0.65	0.87	0	0	0.06	12.5	66.34	0	0	0	0

7 Experimental Stat Results for Setting Number 7:

- Target (Training) Dataset: Size=200 (192 Inactive + 8 Active)
- Testing Dataset: Size=1126 (1122 Inactive + 4 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	100	0	1	1	0	0	0.03	0.19	1	1	1	0
NB	98.5	1.5	0.99	0.83	0.01	0.12	18.34	62.2	0.72	1	0.84	0.01
J48	98.5	1.5	0.81	0.76	0.01	0.12	18.39	62.4	1	0.62	0.76	0.01
SMO	98.5	1.5	0.87	0.79	0.01	0.12	18.39	62.4	0.85	0.75	0.79	0.01
IBk	98.5	1.5	0.87	0.76	0.01	0.11	22.16	58.05	1	0.62	0.76	0.01

But when evaluating using the test set, the results were as follows:

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	99.91	0.08	1	0.88	0	0.02	1.86	41.18	0.8	1	0.88	0
NB	95.64	4.35	0.98	0.13	0.04	0.2	90.59	286.74	0.07	1	0.14	0.04
J48	97.51	2.48	0.73	0.11	0.02	0.15	52.03	218.24	0.07	0.5	0.12	0.02
SMO	100	0	1	1	0	0	0	0	1	1	1	0
IBk	99.91	0.08	0.99	0.85	0	0.02	6.16	41.27	1	0.75	0.85	0