Transfer Learning Experiment for Strain *Plasmodium falciparum* from TS6

November 27, 2014

1 Experimental Stat Results for Setting Number 1:

- Target (Training) Dataset: Size=3 (3 Inactive + 0 Active)
- Testing Dataset: Size=1432 (1405 Inactive + 27 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	99.3	0.69	0.99	0.81	0	0.08	3.3	36.88	0.81	0.81	0.81	0
NB	98.11	1.88	0.5	0	0.01	0.13	8.92	60.61	0	0	0	0.01
J48	98.11	1.88	0.5	0	0.01	0.13	8.92	60.61	0	0	0	0.01
SMO	98.11	1.88	0.5	0	0.01	0.13	8.92	60.61	0	0	0	0.01
IBk	98.11	1.88	0.5	0	0.1	0.15	50.32	67.94	0	0	0	0.01

2 Experimental Stat Results for Setting Number 2:

- Target (Training) Dataset:Size=6 (6 Inactive + 0 Active)
- Testing Dataset: Size=1429 (1402 Inactive + 27 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	99.3	0.69	0.99	0.81	0	0.08	5.03	48.46	0.81	0.81	0.81	0
NB	98.11	1.88	0.5	0	0.01	0.13	13.57	79.63	0	0	0	0.01
J48	98.11	1.88	0.5	0	0.01	0.13	13.57	79.63	0	0	0	0.01
SMO	98.11	1.88	0.5	0	0.01	0.13	13.57	79.63	0	0	0	0.01
IBk	98.11	1.88	0.5	0	0.04	0.13	35.18	79.2	0	0	0	0.01

3 Experimental Stat Results for Setting Number 3:

- Target (Training) Dataset: Size=12 (12 Inactive + 0 Active)
- Testing Dataset: Size=1423 (1396 Inactive + 27 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	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	0.01	0.01	22.9	22.9	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	99.29	0.7	0.99	0.81	0	0.08	8.01	57.34	0.81	0.81	0.81	0
NB	98.1	1.89	0.5	0	0.01	0.13	21.63	94.23	0	0	0	0.01
J48	98.1	1.89	0.5	0	0.01	0.13	21.63	94.23	0	0	0	0.01
SMO	98.1	1.89	0.5	0	0.01	0.13	21.63	94.23	0	0	0	0.01
IBk	98.1	1.89	0.5	0	0.03	0.13	39.33	93.35	0	0	0	0.01

4 Experimental Stat Results for Setting Number 4:

- Target (Training) Dataset: Size=24 (24 Inactive + 0 Active)
- Testing Dataset: Size=1411 (1384 Inactive + 27 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	95.83	4.16	?	0	0.04	0.2	97.87	479.36	0	0	0	0.04
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	0	21.46	21.46	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	99.36	0.63	0.99	0.82	0	0.07	11.37	57.16	0.84	0.81	0.83	0
NB	98.08	1.91	0.5	0	0.01	0.13	34.09	99.98	0	0	0	0.01
J48	98.08	1.91	0.5	0	0.01	0.13	34.09	99.98	0	0	0	0.01
SMO	98.08	1.91	0.5	0	0.01	0.13	34.09	99.98	0	0	0	0.01
IBk	98.08	1.91	0.5	0	0.02	0.13	48.13	99.33	0	0	0	0.01

5 Experimental Stat Results for Setting Number 5:

- Target (Training) Dataset: Size=49 (48 Inactive + 1 Active)
- Testing Dataset: Size=1386 (1360 Inactive + 26 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	95.91	4.08	0.16	-0.03	0.04	0.2	66.89	137.85	0	0	0	0.04
NB	97.95	2.04	0.5	0	0.02	0.14	33.61	97.97	0	0	0	0.02
J48	97.95	2.04	0.04	0	0.04	0.14	67.16	99.07	0	0	0	0.02
SMO	95.91	4.08	0.48	-0.03	0.04	0.2	67.23	138.55	0	0	0	0.04
IBk	97.95	2.04	0.53	0	0.02	0.14	47.38	99.58	0	0	0	0.02

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	99.35	0.64	0.99	0.82	0	0.07	11.1	55.07	0.81	0.84	0.83	0
NB	98.12	1.87	0.5	0	0.01	0.13	33.19	99.82	0	0	0	0.01
J48	98.12	1.87	0.5	0	0.03	0.13	67.96	98.88	0	0	0	0.01
SMO	99.42	0.57	0.92	0.84	0	0.07	10.21	55.37	0.84	0.84	0.84	0
IBk	98.12	1.87	0.96	0	0.01	0.11	34.77	81.65	0	0	0	0.01

6 Experimental Stat Results for Setting Number 6:

- Target (Training) Dataset: Size=98 (96 Inactive + 2 Active)
- Testing Dataset: Size=1337 (1312 Inactive + 25 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	98.97	1.02	0.99	0.79	0.01	0.1	20.22	70.58	0.66	1	0.8	0.01
NB	95.91	4.08	0.09	-0.03	0.04	0.2	80.82	141.16	0	0	0	0.04
J48	96.93	3.06	0.89	-0.02	0.03	0.17	64.29	121.37	0	0	0	0.03
SMO	97.95	2.04	0.74	0.48	0.02	0.14	40.41	99.82	0.5	0.5	0.5	0.02
IBk	97.95	2.04	0.58	0	0.02	0.14	48.72	100.61	0	0	0	0.02

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	99.32	0.67	0.99	0.81	0	0.08	14.68	60.48	0.83	0.8	0.81	0
NB	99.62	0.37	0.98	0.9	0	0.06	7.86	44.98	0.85	0.96	0.9	0
J48	98.27	1.72	0.54	0.14	0.01	0.13	36.15	96.49	1	0.08	0.14	0.01
SMO	99.17	0.82	0.79	0.72	0	0.09	17.29	66.72	0.93	0.6	0.73	0
IBk	98.13	1.86	0.86	0	0.01	0.11	35.27	81.06	0	0	0	0.01

7 Experimental Stat Results for Setting Number 7:

- Target (Training) Dataset: Size=196 (192 Inactive + 4 Active)
- Testing Dataset: Size=1239 (1216 Inactive + 23 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	0.01	0.06	1	1	1	0
NB	97.95	2.04	0.99	0.65	0.02	0.14	45.12	100.61	0.5	1	0.66	0.02
J48	98.97	1.02	0.87	0.74	0.01	0.1	22.56	71.14	0.75	0.75	0.75	0.01
SMO	100	0	1	1	0	0	0	0	1	1	1	0
IBk	97.95	2.04	0.92	0	0.01	0.1	36.26	77.22	0	0	0	0.02

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	99.19	0.8	0.99	0.77	0	0.08	18.82	66.46	0.78	0.78	0.78	0
NB	97.74	2.25	0.99	0.61	0.02	0.15	53.32	111.05	0.45	1	0.62	0.02
J48	98.06	1.93	0.73	0.46	0.01	0.13	45.17	102.98	0.47	0.47	0.47	0.01
SMO	98.95	1.04	0.76	0.64	0.01	0.1	24.47	75.79	0.85	0.52	0.64	0.01
IBk	98.78	1.21	0.82	0.51	0.01	0.1	32.05	74.09	1	0.34	0.51	0.01

8 Experimental Stat Results for Setting Number 8:

- Target (Training) Dataset: Size=392 (384 Inactive + 8 Active)
- Testing Dataset: Size=1043 (1024 Inactive + 19 Active)
- In this experiment I did 10 fold cross validation

	corr	incorr	auc	kap	mae	rmse	rae	rrse	prec	rec	fM	err rate
TL	99.48	0.51	0.97	0.87	0	0.07	12.02	50.31	0.87	0.87	0.87	0
NB	97.95	2.04	0.99	0.65	0.01	0.13	44.81	95.51	0.5	1	0.66	0.02
J48	98.97	1.02	0.87	0.74	0.01	0.1	23.95	71.38	0.75	0.75	0.75	0.01
SMO	99.74	0.25	0.93	0.93	0	0.05	5.98	35.69	1	0.87	0.93	0
IBk	99.48	0.51	0.92	0.85	0	0.05	12.09	42.21	1	0.75	0.85	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	99.23	0.76	0.99	0.78	0	0.08	17.28	59.91	0.78	0.78	0.78	0
NB	98.08	1.91	0.99	0.64	0.01	0.13	47.78	103.43	0.48	1	0.65	0.01
J48	99.52	0.47	0.94	0.86	0	0.06	11.91	51.74	0.85	0.89	0.87	0
SMO	99.13	0.86	0.81	0.72	0	0.09	21.45	69.41	0.85	0.63	0.72	0
IBk	98.75	1.24	0.94	0.51	0.01	0.09	30.79	70.77	0.87	0.36	0.51	0.01

9 Experimental Stat Results for Setting Number 9:

- Target (Training) Dataset: Size=784 (768 Inactive + 16 Active)
- Testing Dataset: Size=651 (640 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	99.36	0.63	0.99	0.84	0	0.07	15.85	53.87	0.82	0.87	0.84	0
NB	97.57	2.42	0.99	0.61	0.02	0.15	59.8	110.44	0.45	1	0.62	0.02
J48	99.74	0.25	0.96	0.93	0	0.05	8.54	36.28	0.93	0.93	0.93	0
SMO	99.61	0.38	0.93	0.9	0	0.06	9.26	43.73	0.93	0.87	0.9	0
IBk	99.1	0.89	1	0.71	0	0.06	17.97	46.28	1	0.56	0.72	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	99.38	0.61	0.99	0.83	0	0.07	17.84	61.31	0.76	0.9	0.83	0
NB	96.15	3.84	0.98	0.45	0.03	0.19	101.62	151.91	0.3	1	0.46	0.03
J48	99.23	0.76	0.95	0.77	0	0.08	23.16	67.19	0.75	0.81	0.78	0
SMO	99.38	0.61	0.9	0.81	0	0.07	16.25	60.77	0.81	0.81	0.81	0
IBk	99.38	0.61	0.99	0.79	0	0.06	17.73	47.46	0.88	0.72	0.79	0