

AlvsPK Challenge: FACT SHEET FORMAT

Title: DoubleBoost

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Acronym of your best entry: DoubleBoost

Reference:

Method:

DoubleBoost is a special version of LogitBoost (Lutz, WCCI 2006) that can only be used for the prior knowledge track for Sylva. It uses the fact, that each pattern is composed of two true records: “each pattern contains each variable twice”.

A new dataset is constructed by putting the second half of the data (variables 55 to 108) below the first half (variables 1 to 54). The new dataset is of dimension $2n$ times 54 (instead of n times 108). This new dataset is used for fitting the base learner (tree). The output of the base learner is averaged over the two records belonging to the same pattern.

Results:

Table 1: Our methods best results

Dataset	Entry name	Entry ID	Test BER	Test AUC	Score	Track
ADA	LogitBoost with trees	13	0.166	0.9168	0.002	Agnos
GINA	LogitBoost with trees	892	0.0339	0.9668	0.2308	Agnos
HIVA	LogitBoost with trees	13	0.3018	0.7512	0.3414	Agnos
NOVA	LogitBoost with trees	892	0.0463	0.9538	0.0449	Agnos
SYLVA	Doubleboost	893	0.0043	0.9957	0.005	Prior
Overall	Doubleboost	893	0.1114	0.8896	0.1381	Prior

Table 2: Winning entries of the AlvsPK challenge

Best results agnostic learning track						
Dataset	Entrant name	Entry name	Entry ID	Test BER	Test AUC	Score
ADA	Roman Lutz	LogitBoost with trees	13, 18	0.166	0.9168	0.002
GINA	Roman Lutz	LogitBoost/Doubleboost	892, 893	0.0339	0.9668	0.2308
HIVA	Vojtech Franc	RBF SVM	734, 933, 934	0.2827	0.7707	0.0763
NOVA	Mehreen Saeed	Submit E final	1038	0.0456	0.9552	0.0385
SYLVA	Roman Lutz	LogitBoost with trees	892	0.0062	0.9938	0.0302
Overall	Roman Lutz	LogitBoost with trees	892	0.1117	0.8892	0.1431
Best results prior knowledge track						
Dataset	Entrant name	Entry name	Entry ID	Test BER	Test AUC	Score
ADA	Marc Boulle	Data Grid	920, 921, 1047	0.1756	0.8464	0.0245
GINA	Vladimir Nikulin	vn2	1023	0.0226	0.9777	0.0385
HIVA	Chloe Azencott	SVM	992	0.2693	0.7643	0.008
NOVA	Jorge Sueiras	Boost mix	915	0.0659	0.9712	0.3974
SYLVA	Roman Lutz	Doubleboost	893	0.0043	0.9957	0.005