

RankOne top ranks for the studied High EPV and Low EPV datasets.

High EPV Datasets (Top Models)		
Optimized Setting Ranks	Trivial Setting Ranks	Default Setting Ranks
cforest (39.13%) *	cforest (43.48%) *	ranger (26.09%) *
ORFlog (17.39%) *	ORFlog (34.78%) *	cforest (21.74%) *
ranger (17.39%) *	glmboost (8.7%) *	extraTrees (17.39%) *
extraTrees (13.04%) *	extraTrees (4.35%)*	ORFlog (13.04%) *
adaboost (4.35%)	gbm (4.35%)	C5.0 (8.7%)
xgbDART (4.35%) *	RRF (4.35%)*	dwdPoly (4.35%) *
xgbTree (4.35%)		gbm (4.35%)
		xgbDART (4.35%) *
Low EPV Datasets (Top Models)		
Optimized Setting Ranks	Trivial Setting Ranks	Default Setting Ranks
ranger (21.79%) *	ORFlog (17.72%) *	dwdPoly (24.05%) *
dwdPoly (15.38%) *	dwdPoly (16.46%) *	ranger (16.46%) *
cforest (11.54%) *	cforest (8.86%) *	extraTrees (8.86%) *
xgbDART (8.97%) *	naive.bayes (7.59%)	avNNet (6.33%)
glmboost (7.69%) *	glmboost (6.33%) *	xgbDART (6.33%) *
ORFlog (7.69%) *	ranger (6.33%) *	bagFDA (5.06%) *
extraTrees (5.13%) *	xgbTree (5.06%)	cforest (5.06%) *
naive.bayes (5.13%)	avNNet (3.8%)	glmboost (5.06%) *
parRF (3.85%) *	bagFDA (3.8%) *	ORFlog (5.06%) *
pda (2.56%)	pcaNNet (3.8%)	naive.bayes (2.53%)
adaboost (1.28%)	extraTrees (2.53%) *	AdaBag (1.27%) *
bagFDA (1.28%) *	nnet (2.53%)	C5.0 (1.27%)
gamboost (1.28%)	adaboost (1.27%)	gamboost (1.27%)
lda (1.28%)	glm (1.27%)	mlp (1.27%)
mlp (1.28%)	knn (1.27%)	mlpWeightDecay (1.27%)
mlpWeightDecay (1.28%)	lda (1.27%)	nnet (1.27%)
rf (1.28%)	mlp (1.27%)	parRF (1.27%) *
svmRadial (1.28%)	mlpWeightDecay (1.27%)	pcaNNet (1.27%)
	multinom (PMR) (1.27%)	rbf (1.27%)
	parRF (1.27%) *	RRF (1.27%) *
	pda (1.27%)	svmRadial (1.27%)
	rf (1.27%)	xgbTree (1.27%)
	svmRadial (1.27%)	
	xgbDART (1.27%) *	

- (%) is the RankOne percentage for each model. (*) mark top ranks achieved by the additional models included in this study (See submitted paper Table 1).
- Models are referred by the Caret method values <http://topepo.github.io/caret/available-models.html>.

Comment: In large percentages of the studied datasets, we observe that many of the additional models included in this study (i.e., marked by *) outperform the models previously included by prior research. That observation holds across the three studied parameter settings of the defect prediction models.