

Stats 202A-HW7: XGBOOST

(1) Perform 5-fold validation for cancer data. output mean, std of the 5-fold validation accuracy.

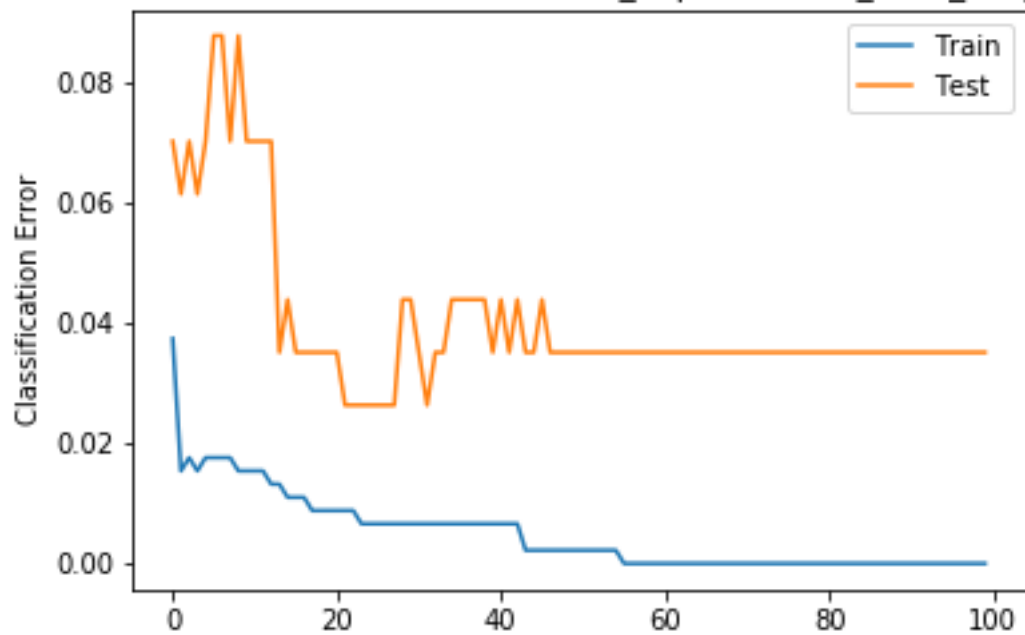
Mean: 0.9666200900481291

Std: 0.02175653851458082

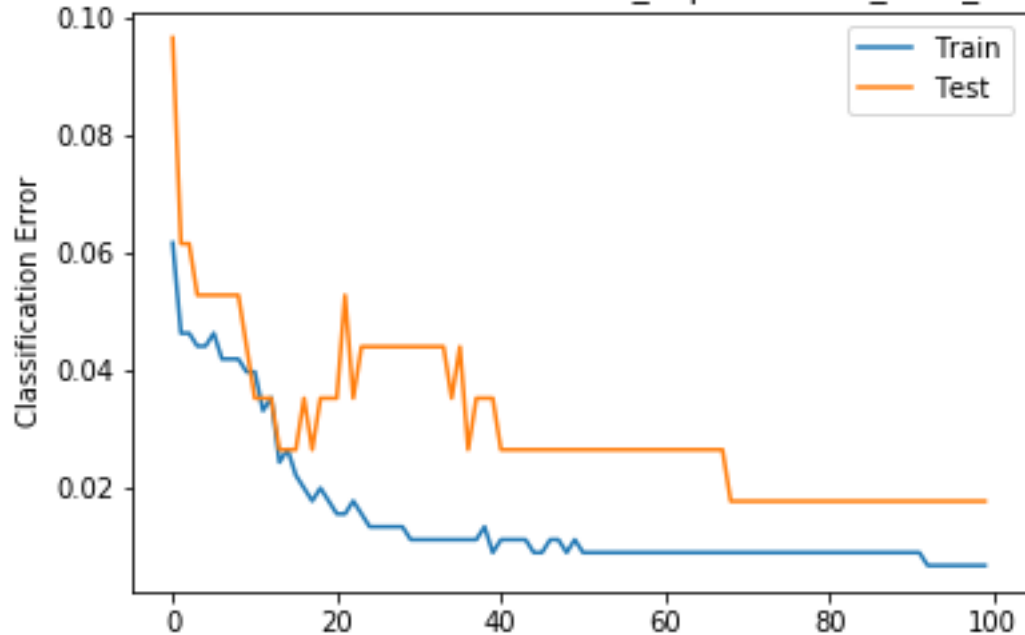
(2) Perform Grid Search for parameter max_depth and min_child_weight
Print the grid search mean test score for each parameter combination. Plot graphs for each setting you tried. (like we plotted in hw6)

Setting	test score
{'max_depth': 3, 'min_child_weight': 0.1}	0.9630931458699473
{'max_depth': 3, 'min_child_weight': 1}	0.9630931458699473
{'max_depth': 3, 'min_child_weight': 5}	0.9648506151142355
{'max_depth': 5, 'min_child_weight': 0.1}	0.961335676625659
{'max_depth': 5, 'min_child_weight': 1}	0.9666080843585237
{'max_depth': 5, 'min_child_weight': 5}	0.9630931458699473
{'max_depth': 7, 'min_child_weight': 0.1}	0.961335676625659
{'max_depth': 7, 'min_child_weight': 1}	0.9648506151142355
{'max_depth': 7, 'min_child_weight': 5}	0.9630931458699473

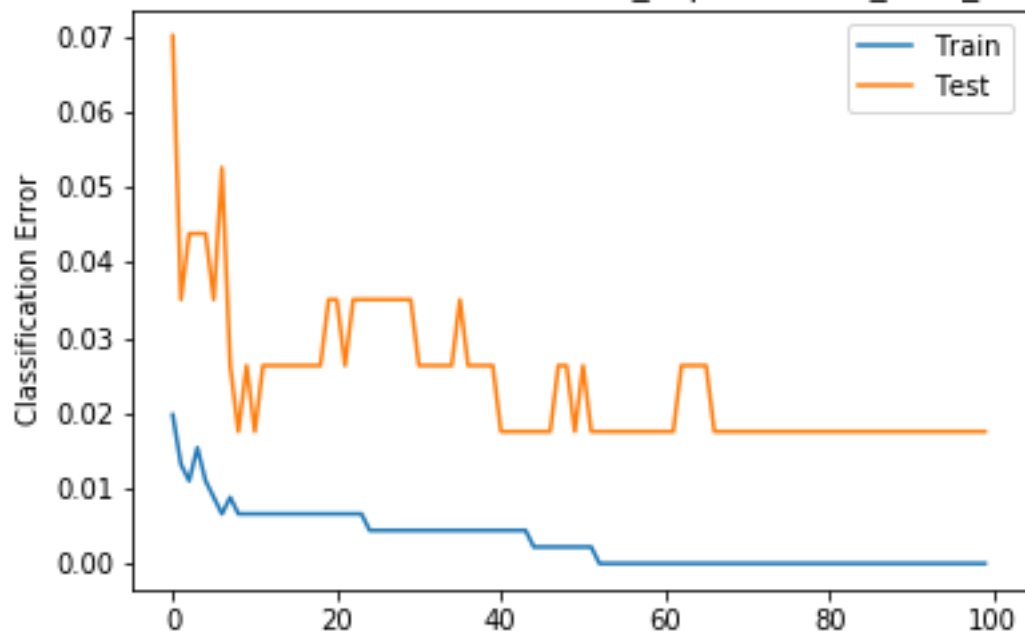
XGBoost Classification Error with max_depth=3, min_child_weight=0.1



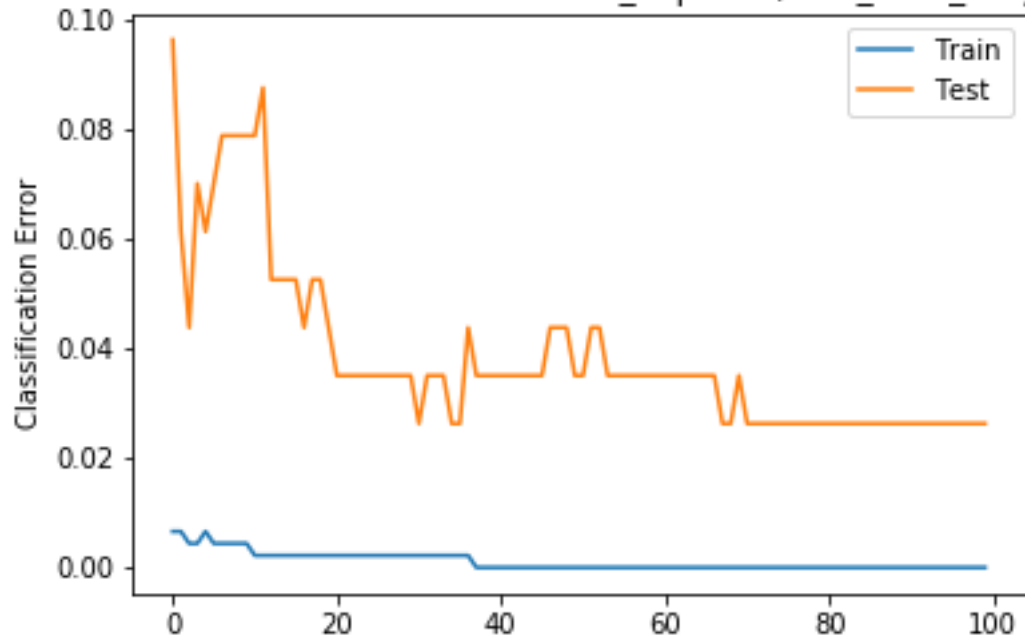
XGBoost Classification Error with max_depth=7, min_child_weight=5



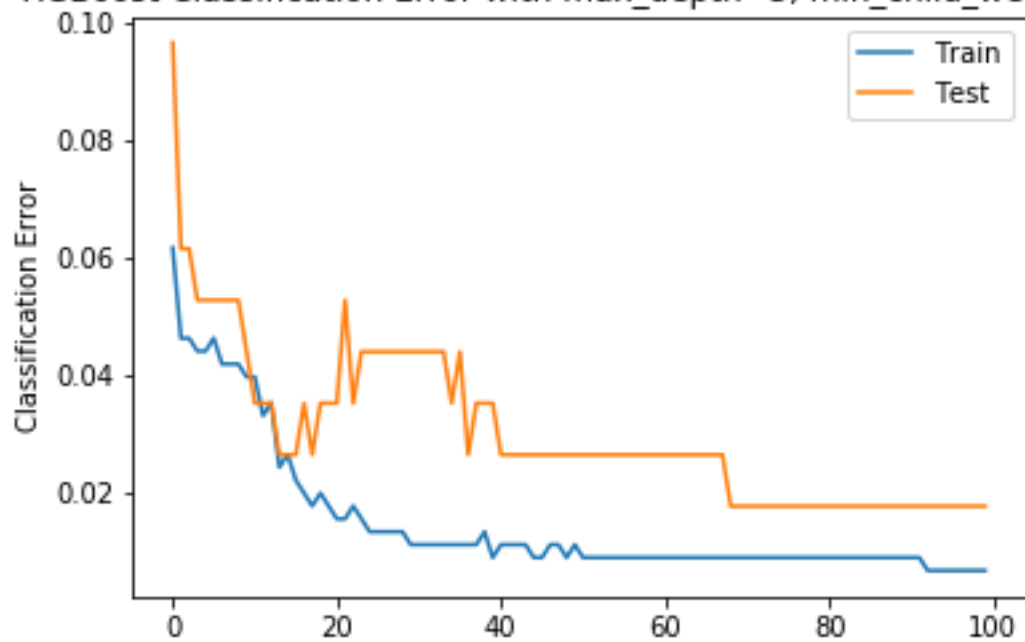
XGBoost Classification Error with max_depth=7, min_child_weight=1



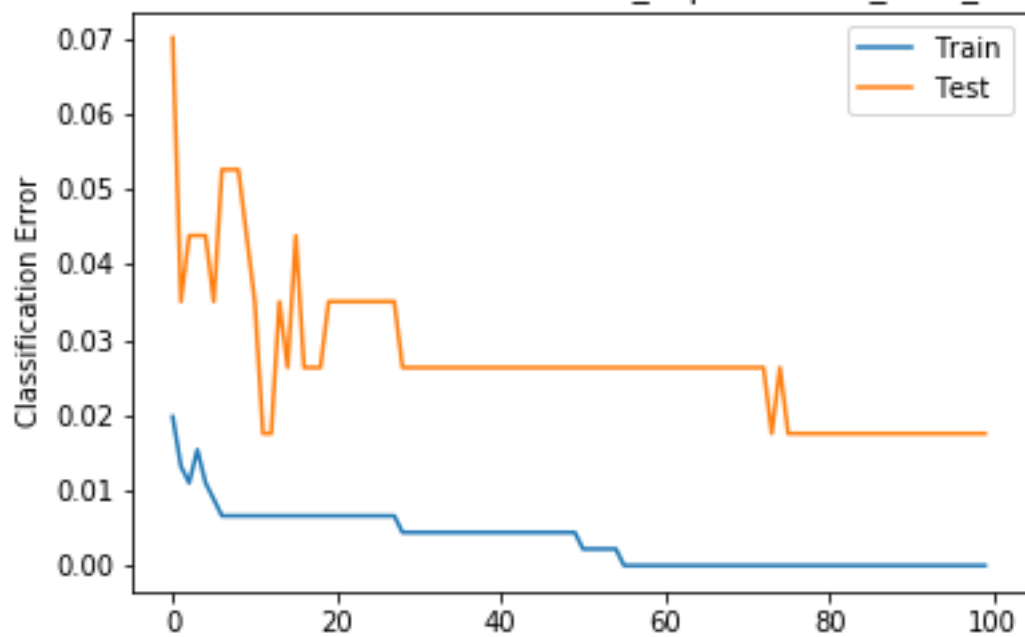
XGBoost Classification Error with max_depth=7, min_child_weight=0.1



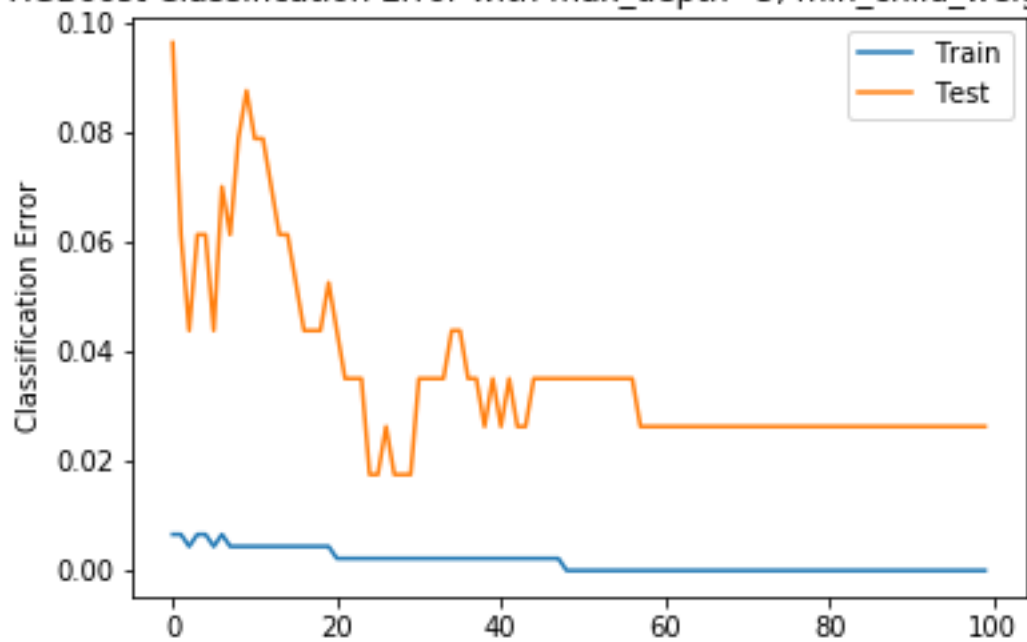
XGBoost Classification Error with max_depth=5, min_child_weight=5



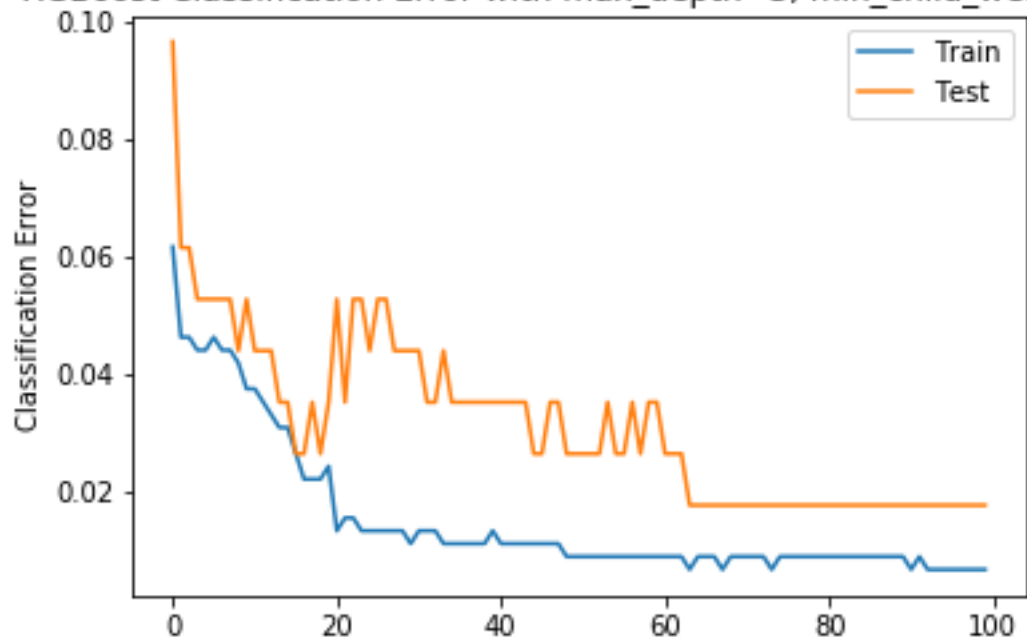
XGBoost Classification Error with max_depth=5, min_child_weight=1



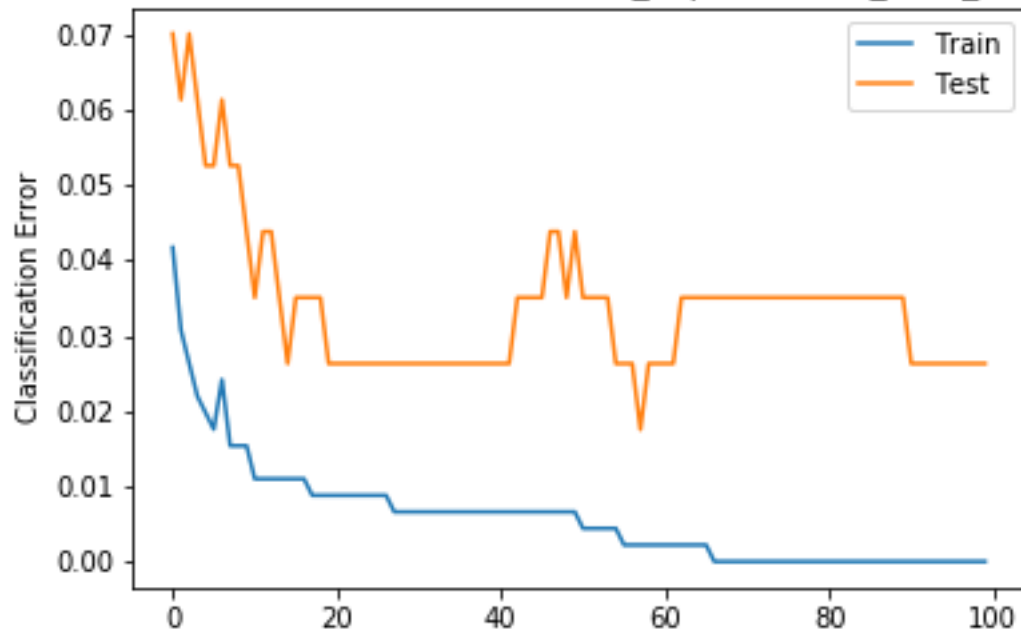
XGBoost Classification Error with max_depth=5, min_child_weight=0.1



XGBoost Classification Error with max_depth=3, min_child_weight=5



XGBoost Classification Error with max_depth=3, min_child_weight=1



- (3) Plot the feature importance of the best model
 {'max_depth': 5, 'min_child_weight': 1}

