

Algorithm	Age filled w/ total median				Age filled according to class median				PCA Analysis				Differences			
	Score	Accuracy	Precision Not Survived	Precision Survived	Score	Accuracy	Precision Not Survived	Precision Survived	Score	Accuracy	Precision Not Survived	Precision Survived	Score	Accuracy	Precision Not Survived	Precision Survived
SVC	83,3%	85,0%	85,0%	87,0%	83,1%	85,0%	85,0%	87,0%					0,2%	0,0%	0,0%	0,0%
GBC	98,2%	79,0%	84,0%	71,0%												
LogisticRegression	79,6%	85,0%	86,0%	82,0%					70,3%	74%	74%	73%	9,3%	11,0%	12,0%	9,0%
Naive Bayes	77,2%	81,0%	84,0%	74,0%	77,3%	81,0%	84,0%	74,0%					- 0,1%	0,0%	0,0%	0,0%
Random Forest Regression	91,8%	81,0%	83,0%	78,0%					89,6%	79%	80%	78%	2,2%	2,0%	3,0%	0,0%
Random Forest Classifier	99,8%	82,0%	84,0%	79,0%					99,8%	79%	79%	78%	0,0%	3,0%	5,0%	1,0%
Multilayer perceptron	80,1%	78,0%	83,0%	71,0%												

Comparing these values, some conclusions come to mind: the very first, the difference in filling the age column is neglectable. So, choosing the simpler method (null values replaced by the median of the column) seems wiser.

Second of all, if the data size is an issue, a principal component analysis (PCA) with the Random Forest models seem to be a good choice. Since the models, themselves, have proven to be among the best chosen and the maximum variance with PCA was 5%.

Furthermore, more complicate and heavy models such as neural network Multilayer Perceptron (MLP) proved to be inadequate for this problem.

Finally, choosing either Support Vector Machine (SVC) that had the highest precision on predicting who could survive, which is the problem in question, or Random Forest Classifier that showed the best results overall, despite a lower precision on who could survive, which may lead to a better generalization, seem to be a good choice for this problem.