**XGBoost Training Accuracies**

Bert: 0.93

PCA Bert: 0.93

LSA: 0.94

LDA: 0.84

**Best Training Accuracies**

Bert:

Simple random forest: 1

Simple bagging random forest: 1

Simple Extra trees: 1

Simple adaboost: 1

Simple xgboost: .98

XGboost Hyperp opt: .93

Simple Catboost: .97

LSA:  
Simple random forest: 1

Simple bagging extra trees: 1

Simple bagging random forest: 1

Simple adaboost: 1

Simple xgboost: .98

XGboost Hyperp opt: .94

Simple Catboost: .96

LDA:

Simple random forest: 1

Simple bagging extra trees: 1

Simple bagging random forest: .98

Simple Extra trees: 1

Simple adaboost: 1

Simple xgboost: .9

XGboost Hyperp opt: .84

**Conclusions:**

Bert, PCA Bert and LSA are pretty similar, while LDA performed a little worse.

BERT performs better on most desafios, but LSA performs better on 12 vs 13 and 17 vs 18: it is more balanceds

With simpler algos, such as Logistic Regression, BERT works way better. This means that a complex model such as XGBoost is needed to exploit LSA’s features.

The pair of desafios more difficult to tell apart are (the same shows across all models):

* 12 vs 13
* 17 vs 18