## Part A - Baselines

### TF-IDF + Balanced SVM

**Command:** !python tfidf.py -m tfidf\_svm --kernel rbf --class\_weight balanced --max\_ngram 3 --jobs -2 --seed 42 --tokenizer glove

### TF-IDF + GBDT

**Command:** !python tfidf.py -m tfidf\_gradient\_boosting --max\_ngram 3 --loss deviance --estimators 100 --jobs -2 --seed 42 --tokenizer glove

In [4]:

### BoWV + Balanced SVM

**Command:** !python BoWV.py -m svm --kernel rbf --class\_weight balanced --jobs -2 -f GloVe/glove.twitter.27B.200d.txt -d 200 --seed 42 --tokenizer glove

In [12]:

### BoWV + GBDT

**Command:** !python BoWV.py -m gradient\_boosting --loss deviance --estimators 500 --jobs -2 -f GloVe/glove.twitter.27B.200d.txt -d 200 --seed 42 --tokenizer glove

## Part B - DNNs only

### CNN + Random Embedding

**Command:** !python cnn.py -f GloVe/glove.twitter.27B.200d.txt -d 200 --tokenizer glove --loss categorical\_crossentropy --optimizer adam --epochs 10 --batch-size 128 --folds 10 --initialize-weights random --learn-embeddings

### CNN + GloVe

**Command:** !python cnn.py -f GloVe/glove.twitter.27B.200d.txt -d 200 --tokenizer glove --loss categorical\_crossentropy --optimizer adam --epochs 10 --batch-size 128 --folds 10 --initialize-weights glove --learn-embeddings

### LSTM + Random Embedding

**Command:** !python lstm.py -f GloVe/glove.twitter.27B.200d.txt -d 200 --tokenizer glove --loss categorical\_crossentropy --optimizer adam --initialize-weights random --learn-embeddings --epochs 10 --batch-size 128

### LSTM + GloVe

**Command:** !python lstm.py -f GloVe/glove.twitter.27B.200d.txt -d 200 --tokenizer glove --loss categorical\_crossentropy --optimizer adam --initialize-weights glove --learn-embeddings --epochs 10 --batch-size 128

## Part C - DNNs + GBDT Classifier

### CNN + GloVe + GBDT

**Command:** !python nn\_classifier.py gradient\_boosting cnn\_glove.h5

### LSTM + GloVe + GBDT

**Command:** !python nn\_classifier.py gradient\_boosting lstm\_glove.h5