Scrapy Project

Multi-Class Text Classification with Scikit-Learn

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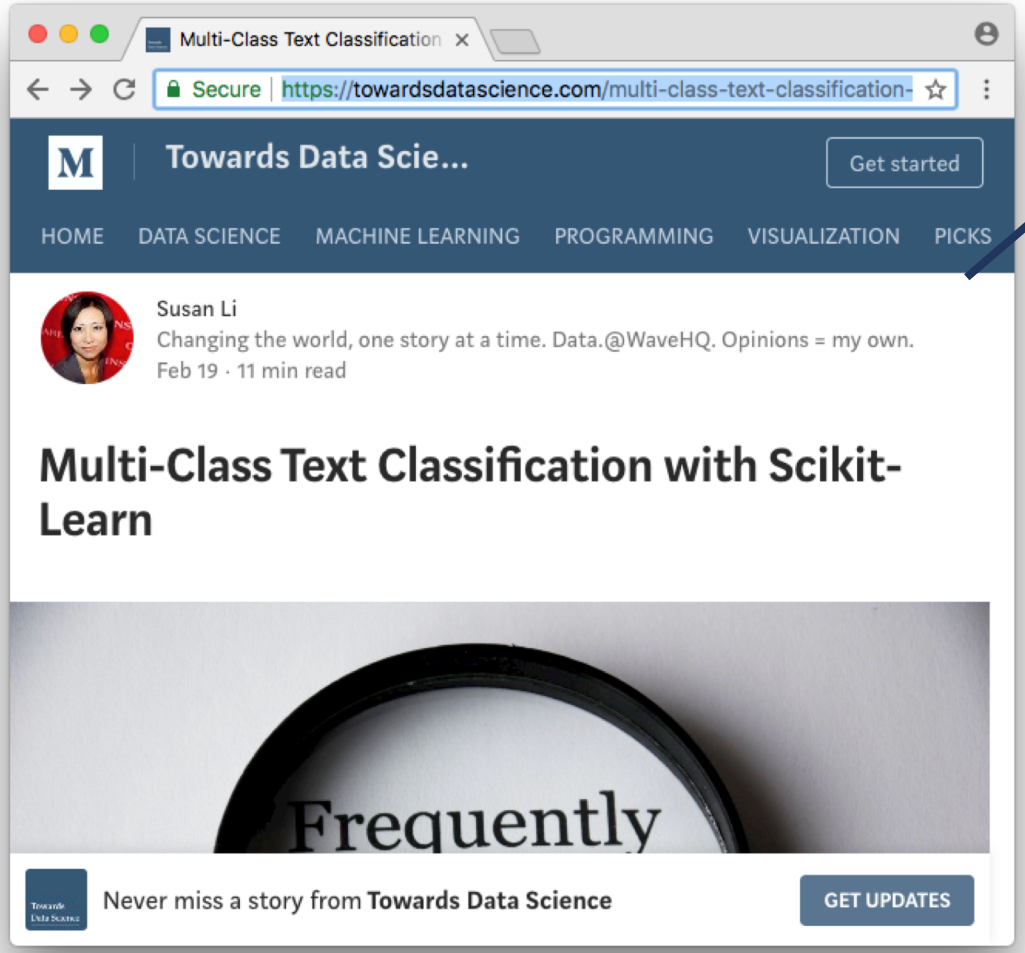
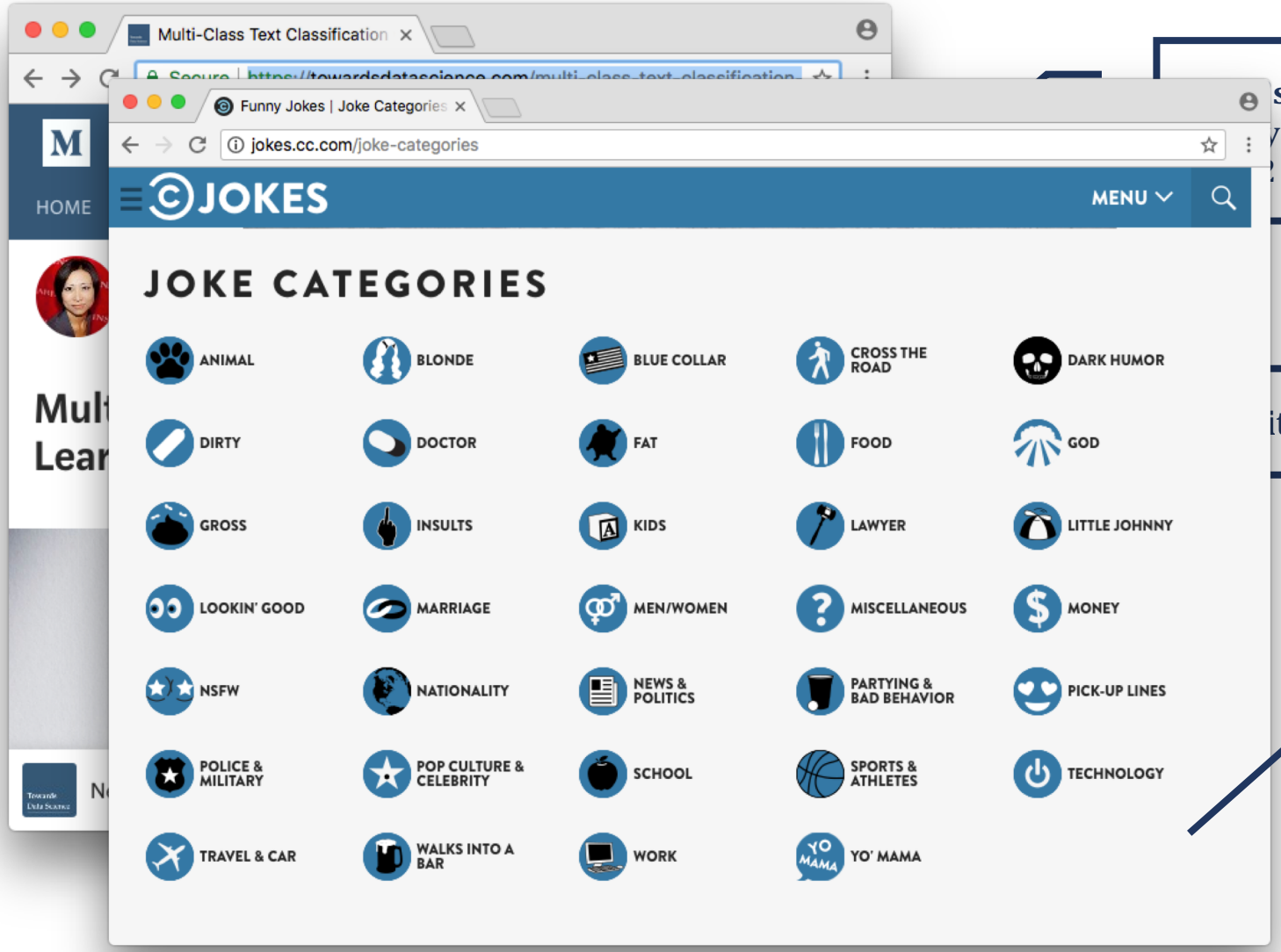
Introduction



Susan's article
Classifying costumer finance complaints into 12 pre-defined classes.

Does it work in different situations?

Introduction



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ving costumer finance complaints
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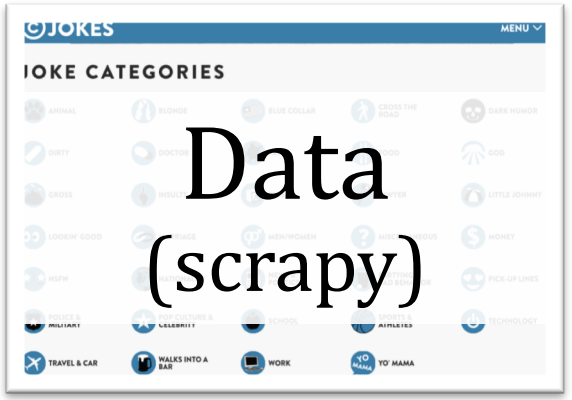
Scrapy
Source of data.

Steps

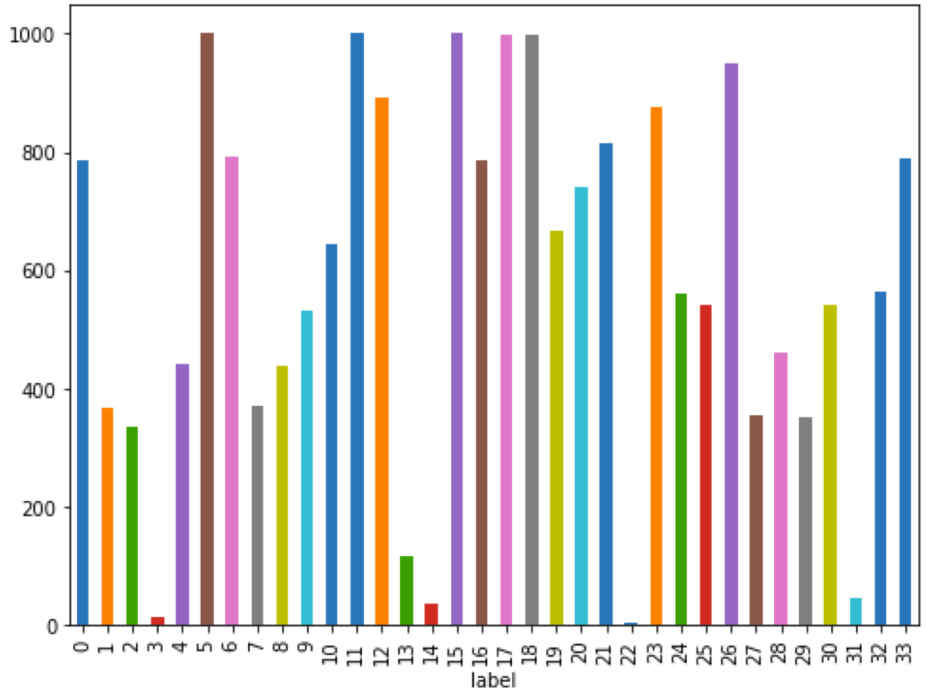


Data
(scrapy)

- Tf–idf term weighting
- Naive Bayes Classifier
- Random Forest
- Logistic Regression

Accuracy

34 Imbalanced Classes

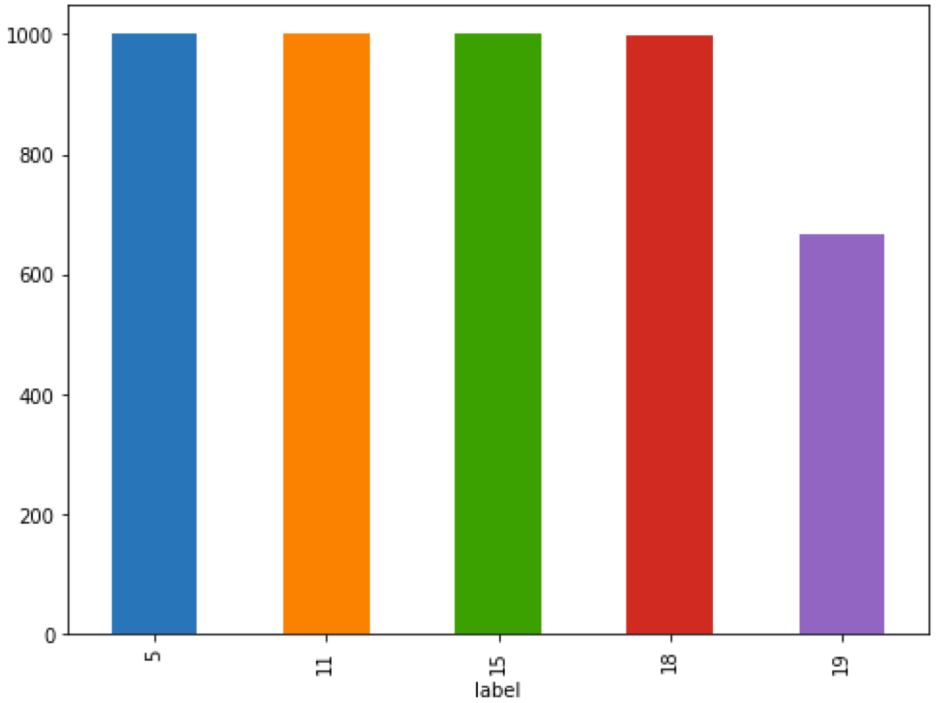


Accuracy

Model	Train	Test*
Naive Bayes Classifier	39%	17%
Random Forest	30%	15%
Logistic Regression	43%	18%

** Test size: 20%*

5 Balanced Classes



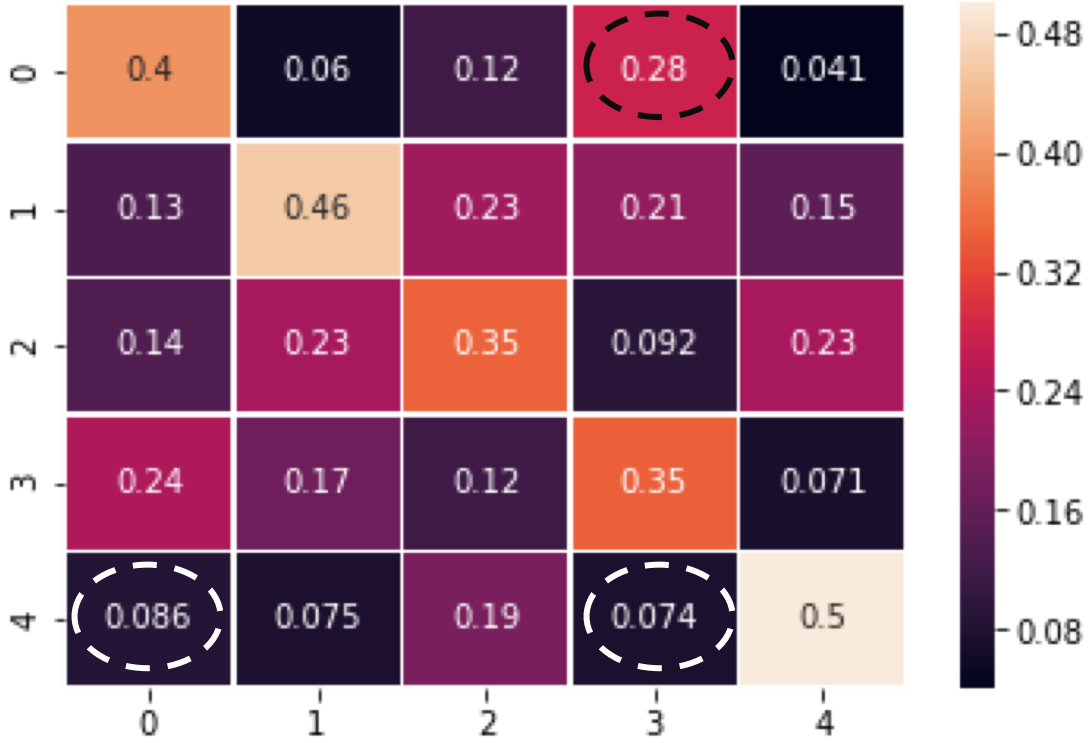
Accuracy

Model	Train	Test*
Naive Bayes Classifier	60%	38%
Random Forest	61%	35%
Logistic Regression	65%	39%

** Test size: 20%*

5 Balanced Classes

Test sample size: 934



0	dirty
1	insults
2	looking good
3	miscellaneous
4	money

Rows: Real Class

Columns: Predicted Class

Accuracy

Model	Train	Test*
Logistic Regression	65%	39%

** Test size: 20%*

Improvements

- Tuning the models parameters properly (GridSearchCV);
- Finding the appropriate metrics to compare the model's performance.