Ted Talks Content Analysis

Which is more persuasive?

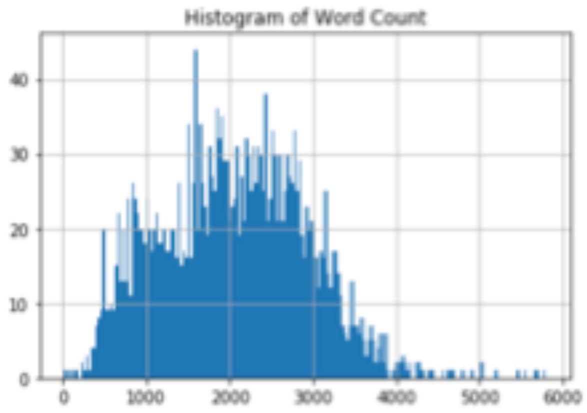
Data

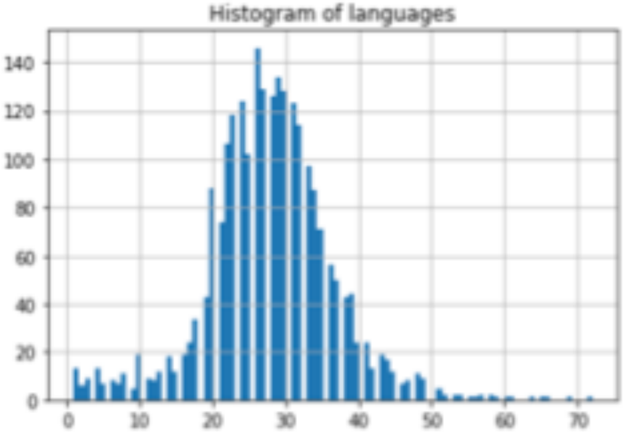
- Word count
- Language available
- Talk Transcript

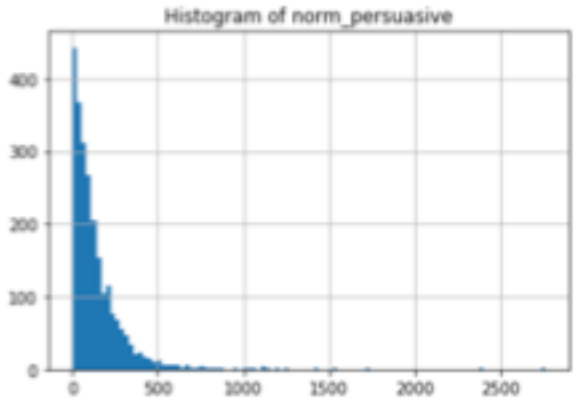
--Predict object:

- Persuasive score

No Missing Value

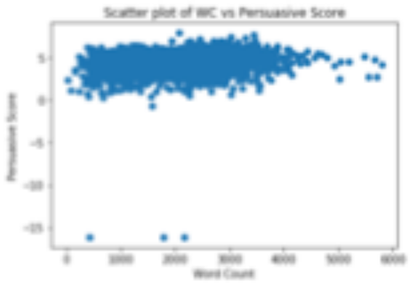


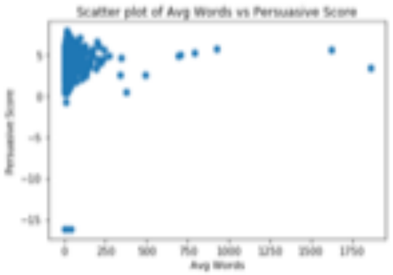




Feature Engineering

- Log transformation – persuasive score
- Sentence Tokenizing
  - Compute the number of sentences
  - Compute the average length of sentences



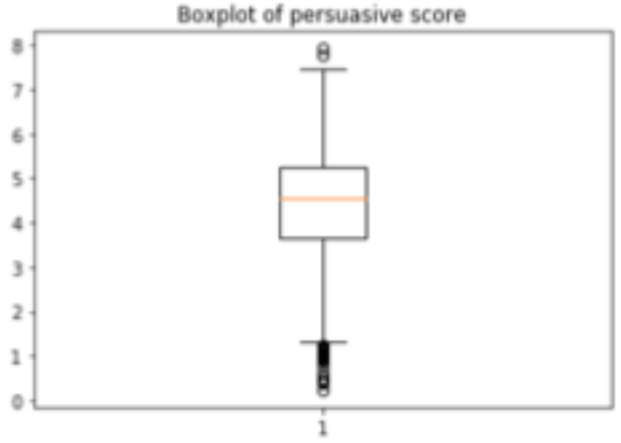


Tokenizing and Frequency counts

- Using kmeans to classify words into 80 categories;
- Count the frequency of each categories in every transcript of talk;
- Build new dataframe for modeling

Labeling

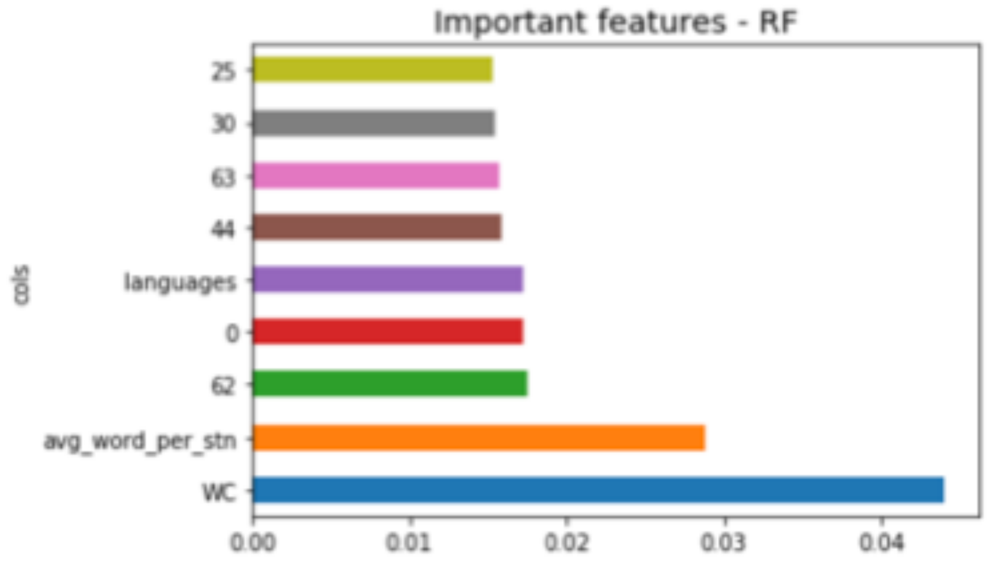
- Persuasive ： 1 if score > 3.5
- Not Persuasive : 0 if score < 3.5



Model comparing

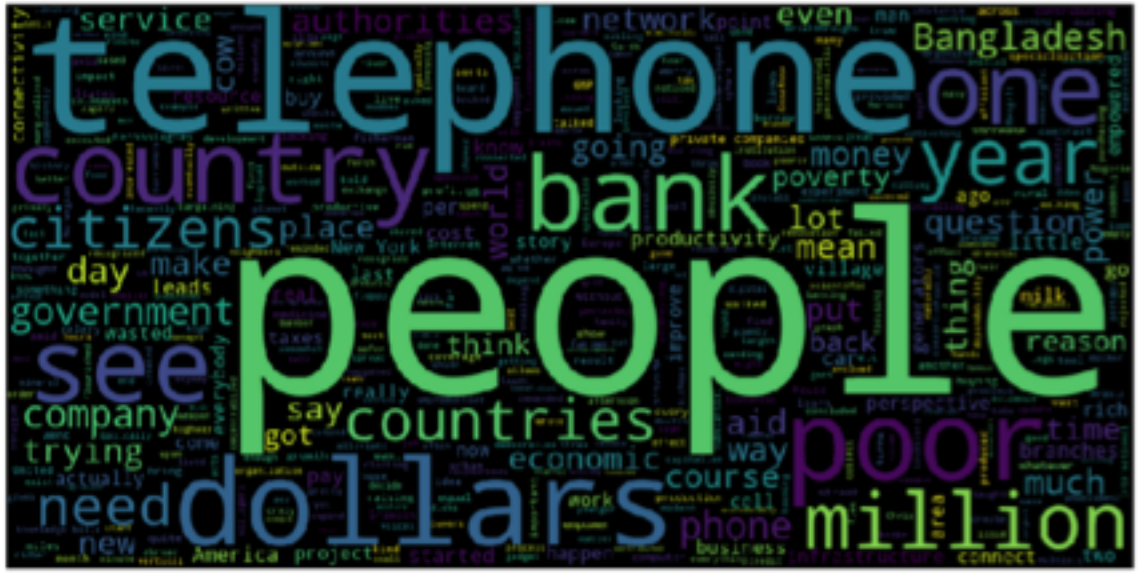
Accuracy	With stop words	Without stop words	With stop words & under- sampling	With stop words & over- sampling
Random Forest	0.784	0.782	0.782	0.778
Logistics Regression	0.762	0.762	0.775	0.684
SVC	0.784	0.784	0.784	0.773

Importance Features



- Length of the talk
- some groups of specific words

- An example of group of words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people
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government
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Bangladesh
service
authorities
network
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money
poverty
going
place
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milk
put
back
thing
village
story
cost
leads
wasted
really
actually
rich
work
cell
connect