Subreddit Classification

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Define Problem

word Cloud: r/singapore and r/unitedkingdom

Problem Statement:

The aim of this project was to analyse the language used in these subreddits and to examine whether or not they were unique to both Singapore and the United Kingdom

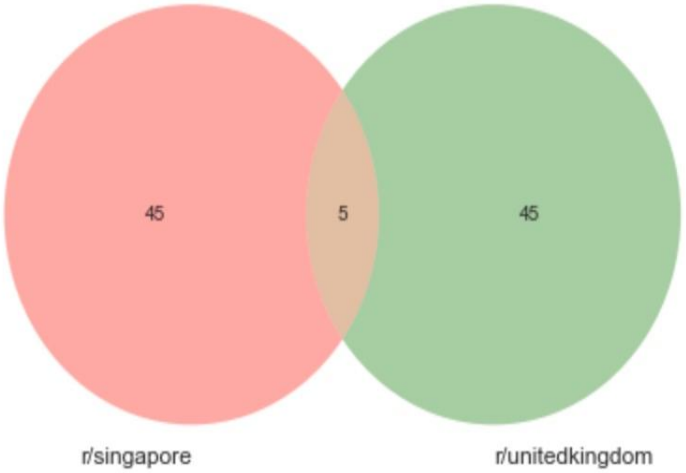
Gather Data

Data Collection: r/singapore & r/unitedkingdom

Number of data: 944 and 956 comments

X = comments, y = subreddit

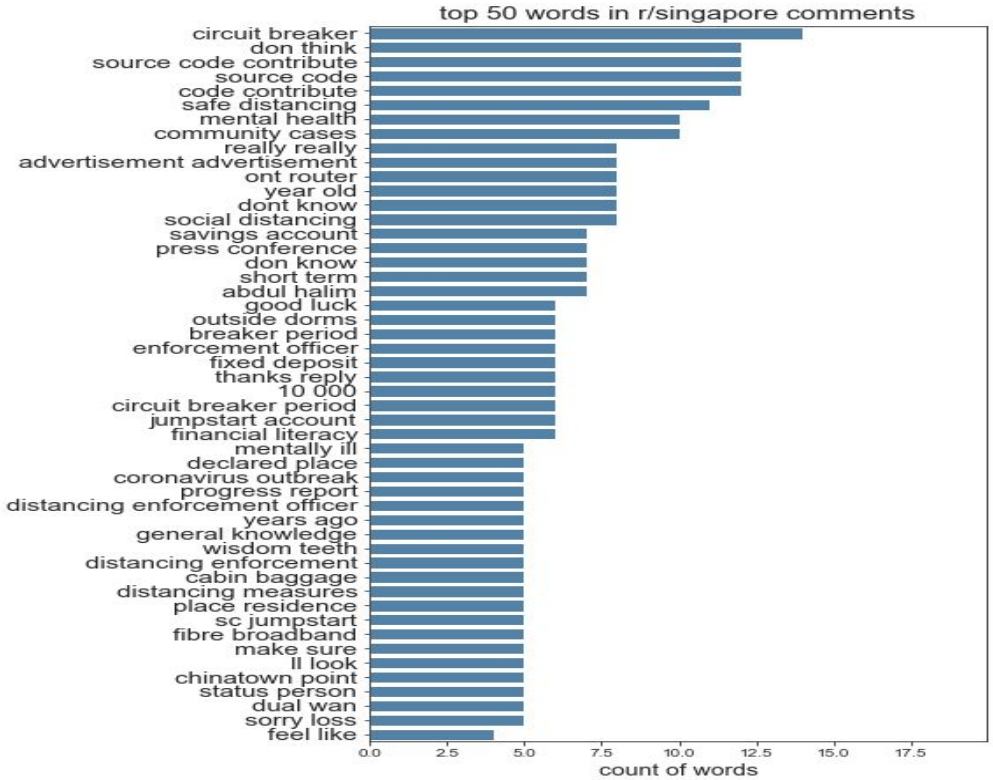
Explore Data

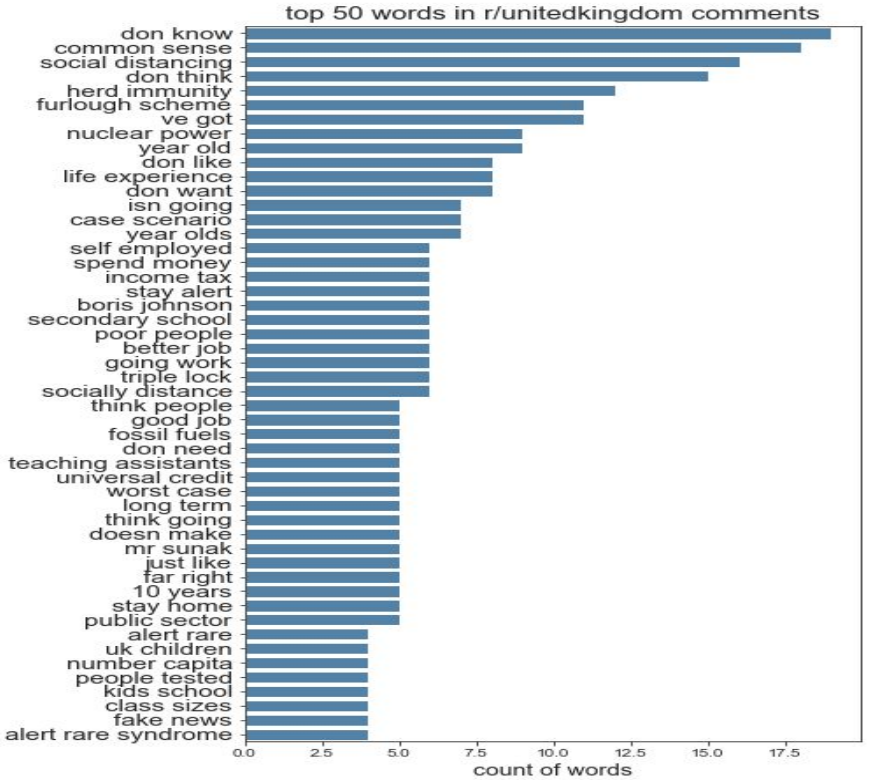


Exploratory Data Analysis:

- “Covid 19” top word in /singapore, “Don know” top word in /unitedkingdom
- Covid related issues dominate both subreddits
- Only 5 out of top 50 phrases similar (2,3 ngram)
- **Average number of words in comments:** 39 for r/singapore and 45 for r/unitedkingdom

Explore Data





Modeling with Data

Model	Training Score	Test Score
CVEC + Naive Bayes	0.99	0.68
TFID + Naive Bayes	0.99	0.69
CVEC + Logistic Regression	0.99	0.76
TFID + Logistic Regression	1	0.80

Model Evaluation

	Predicted UK	Predicted Singapore
Actual UK	147	30
Actual Singapore	36	129

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Accuracy: 0.8070175438596491
              precision    recall  f1-score   support

           0       0.80      0.83      0.82       177
           1       0.81      0.78      0.80       165

    accuracy                           0.81       342
   macro avg       0.81      0.81      0.81       342
weighted avg       0.81      0.81      0.81       342
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Conclusion:

- Despite limitations, model has predictive value
- both subreddits have a lot of covid language even after stop words
- differences stem mainly from current affairs
- larger corpus which incorporates larger vocab could be useful