Figure: Data flow diagram
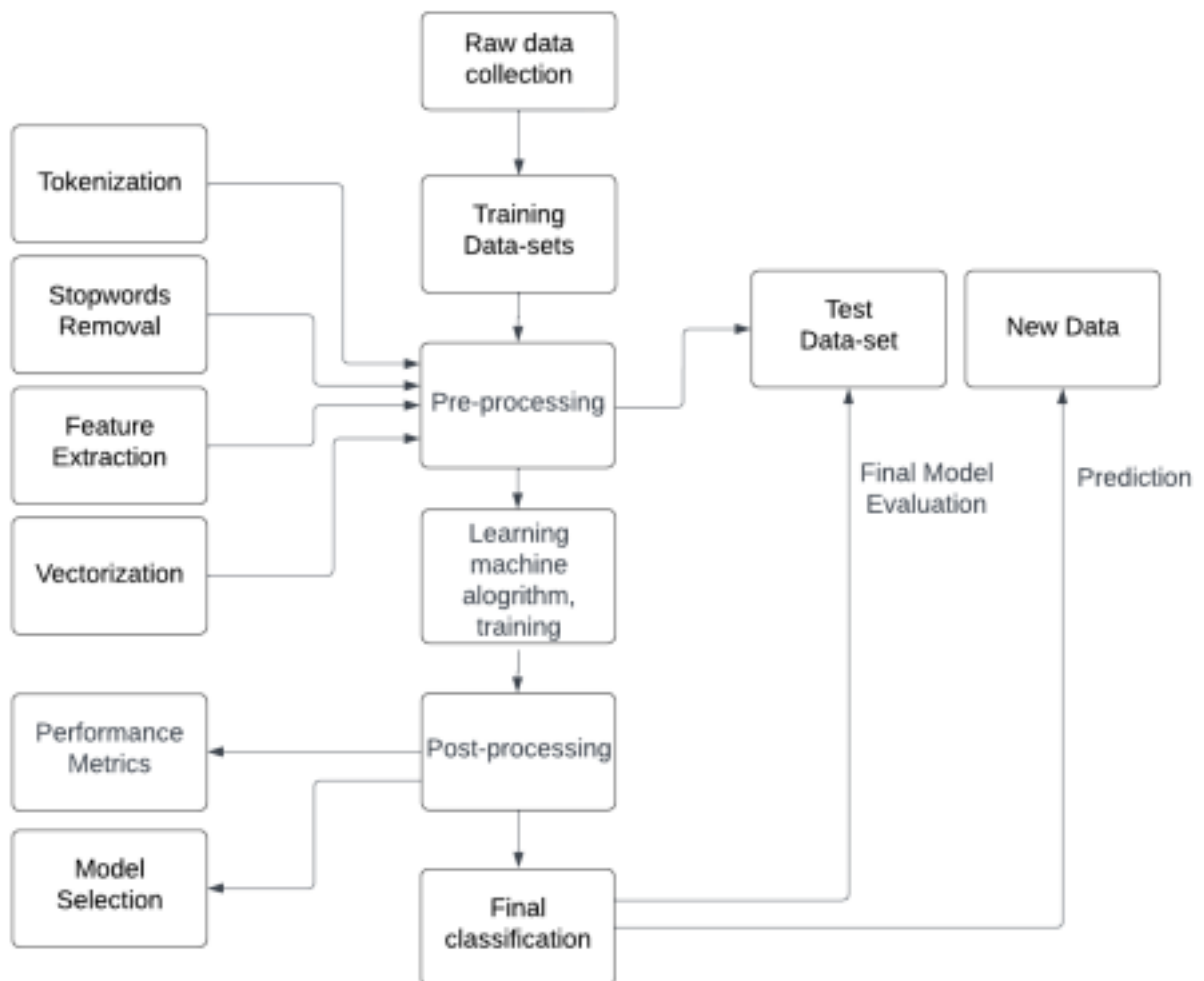

Figure: Model Building
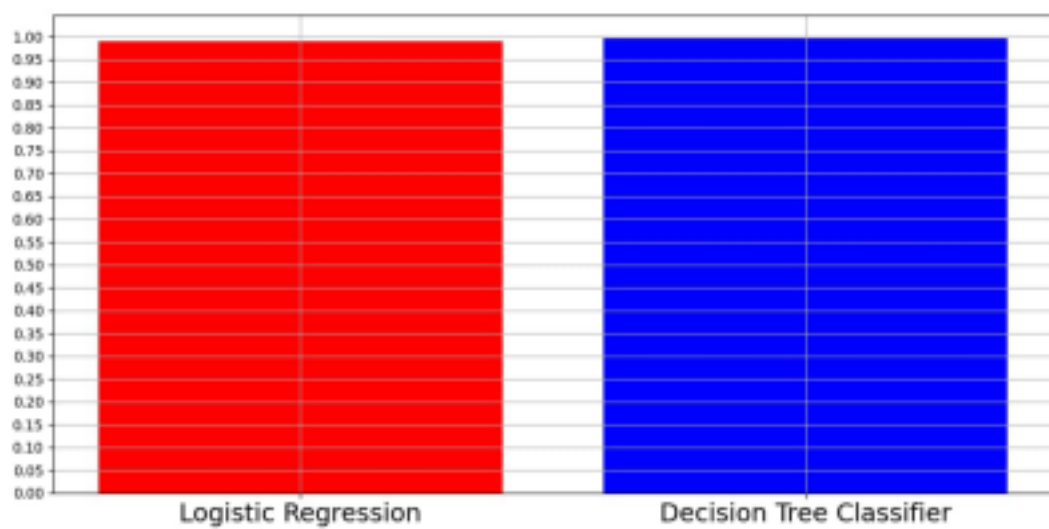
Result Analysis

Machine Learning Classifiers
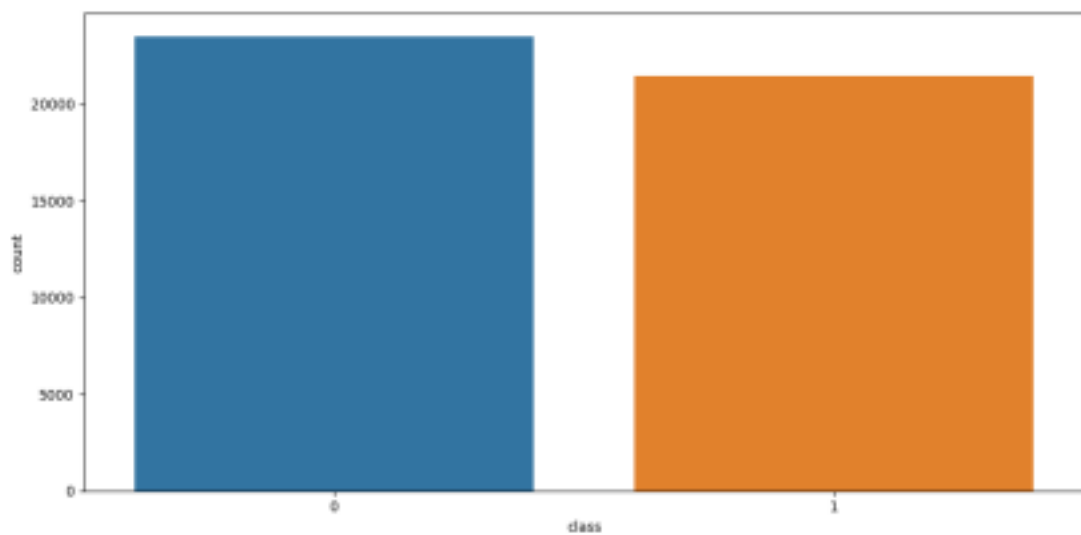

Figure: Bar chart comparison of models

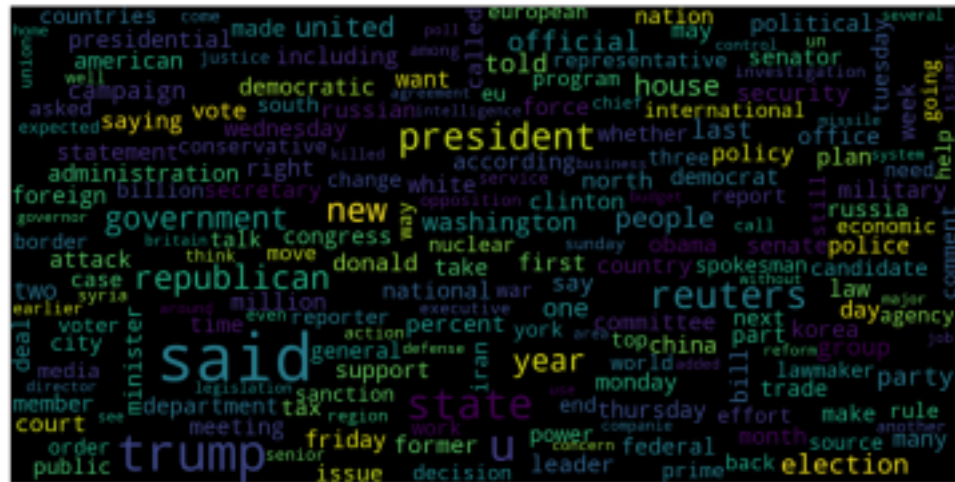Figure 4.2: Graph representing the count of Class 0 (Fake) and Class 1(Real)

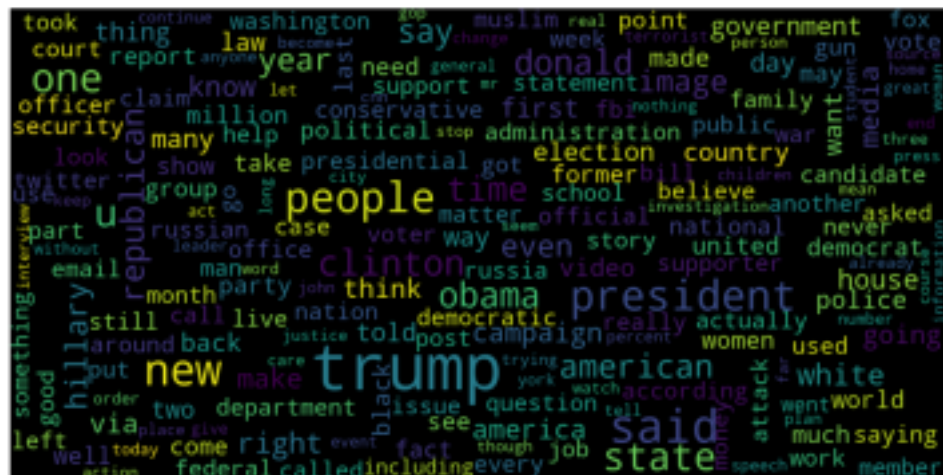Figure: Image of WordCloud representation of Real news

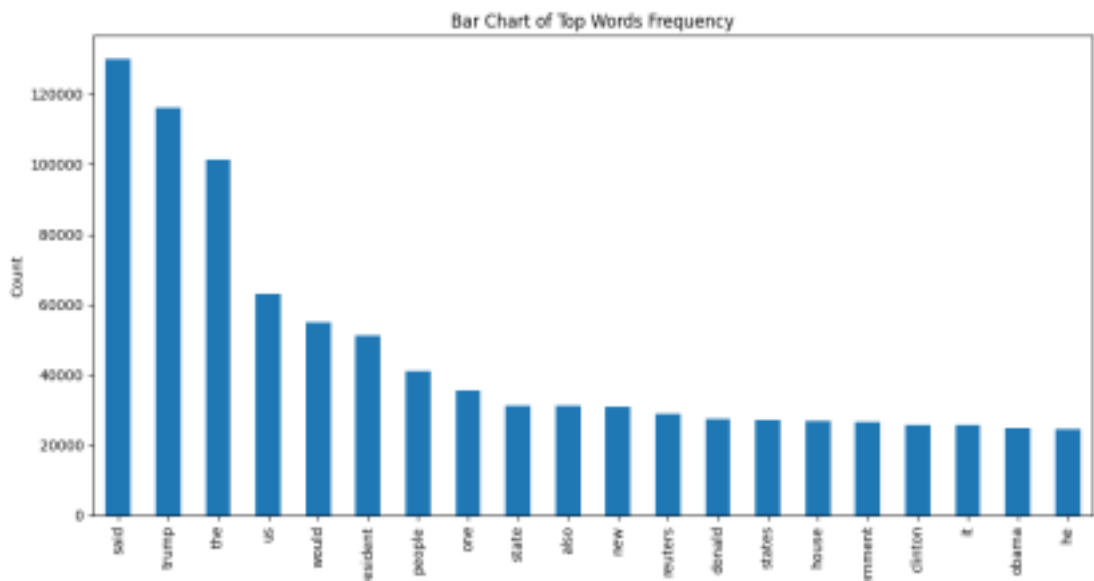Figure: Image of WordCloud representation of Fake news

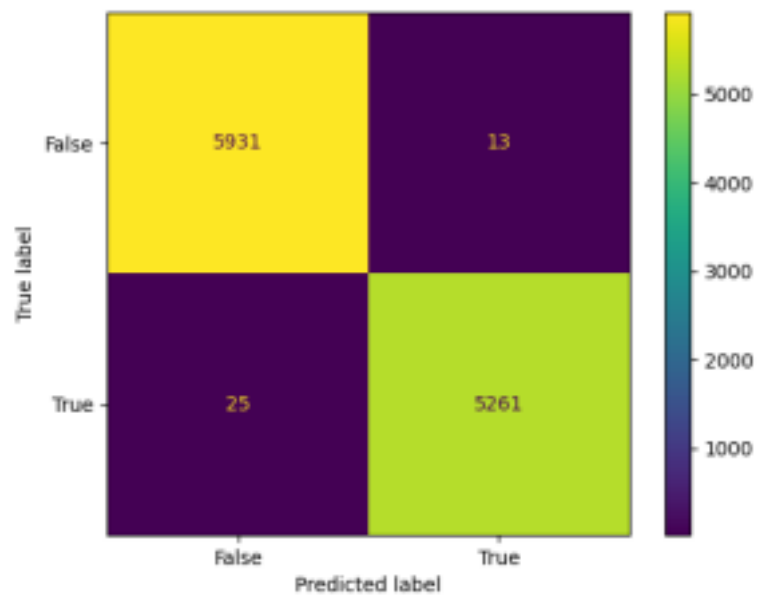Figure: Bar Charts of top 20 words frequency in dataset

Figure: Confusion matrix depicts comparison between the true label and predicted label

```
C:\Users\parul\OneDrive\Desktop\FNS>code .

C:\Users\parul\OneDrive\Desktop\FNS>python app.py
[nltk_data] Downloading package punkt to
[nltk_data]     C:\Users\parul\AppData\Roaming\nltk_data...
[nltk_data]   Package punkt is already up-to-date!
[nltk_data] Downloading package stopwords to
[nltk_data]     C:\Users\parul\AppData\Roaming\nltk_data...
[nltk_data]   Package stopwords is already up-to-date!
                                        title ... class
0        Donald Trump Sends Out Embarrassing New Year'... ...      0
1        Drunk Bragging Trump Staffer Started Russian ... ...      0
2        Sheriff David Clarke Becomes An Internet Joke... ...      0
3        Trump Is So Obsessed He Even Has Obama's Name... ...      0
4        Pope Francis Just Called Out Donald Trump Dur... ...      0
...                                               ...  ...    ...
21412    'Fully committed' NATO backs new U.S. approach... ...      1
21413    LexisNexis withdrew two products from Chinese ... ...      1
21414    Minsk cultural hub becomes haven from authorities ...      1
21415    Vatican upbeat on possibility of Pope Francis ... ...      1
21416    Indonesia to buy $1.14 billion worth of Russia... ...      1

[44919 rows x 5 columns]
100%|████████████████████████████████████████| 44919/44919 [8:18:17<00:00,  1.50it/s]
0.9941523939564844
0.9886019690382983
0.9999703167205913
0.9966162065894925
```

Figure 4.7: Output at Terminal which displays accuracy score of Logistic Regression Clas
sifier and Decision Tree Classifier