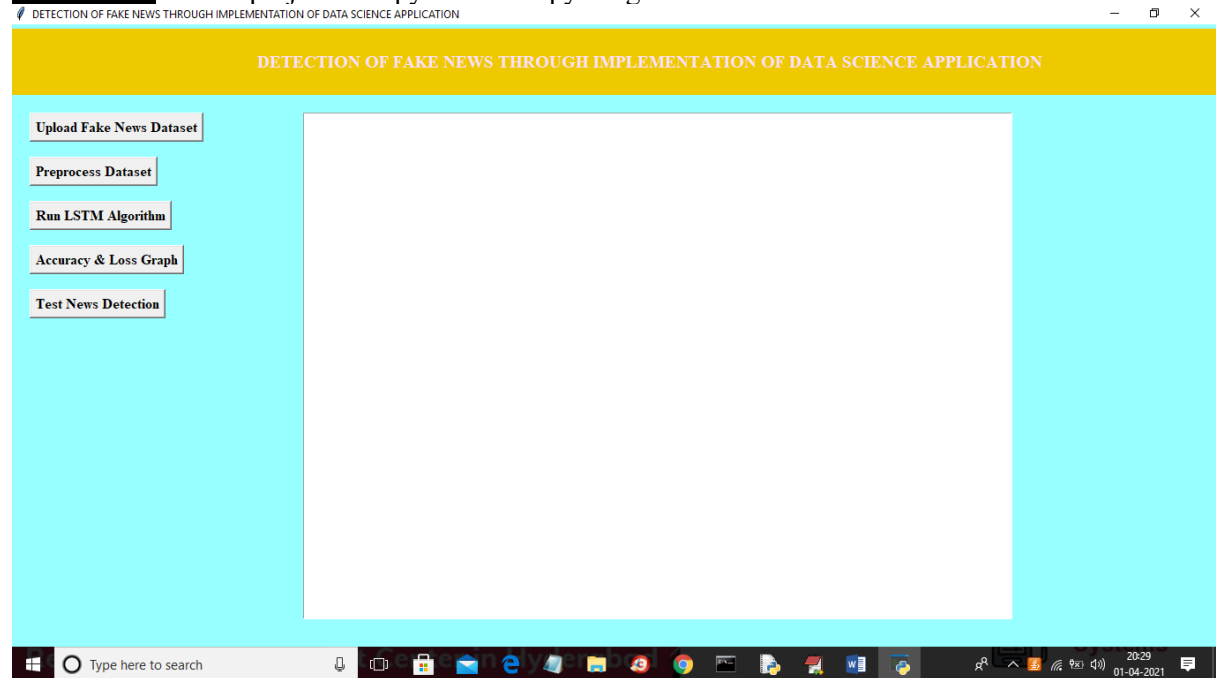
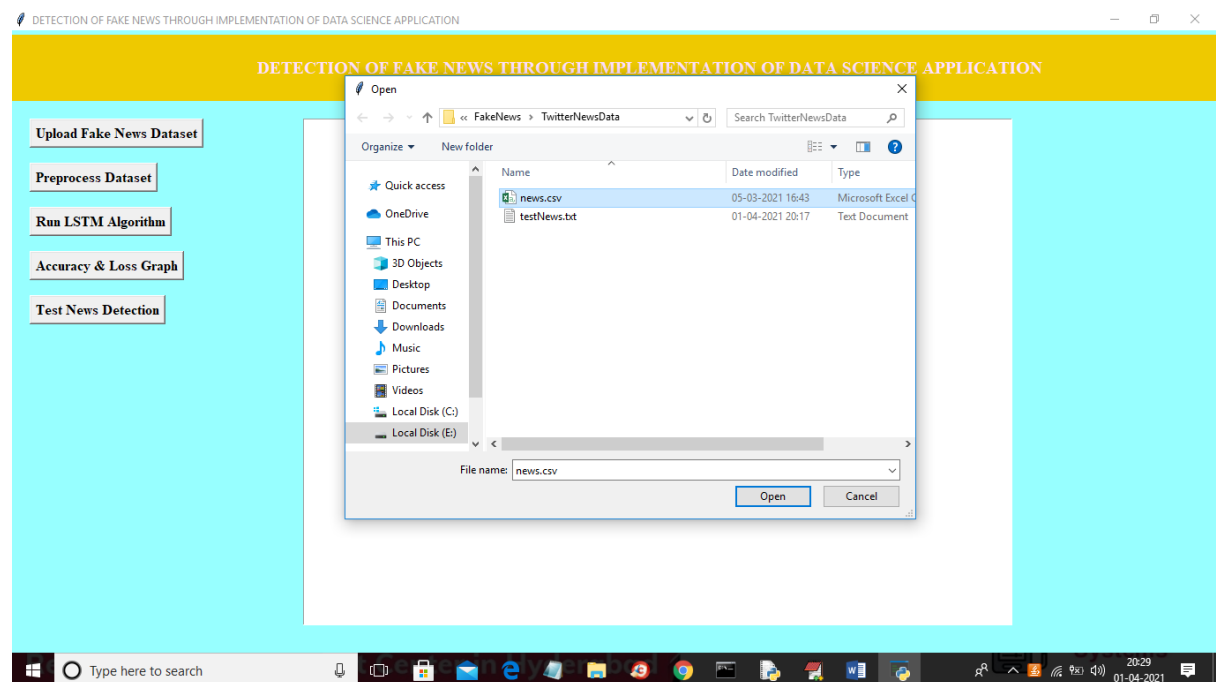


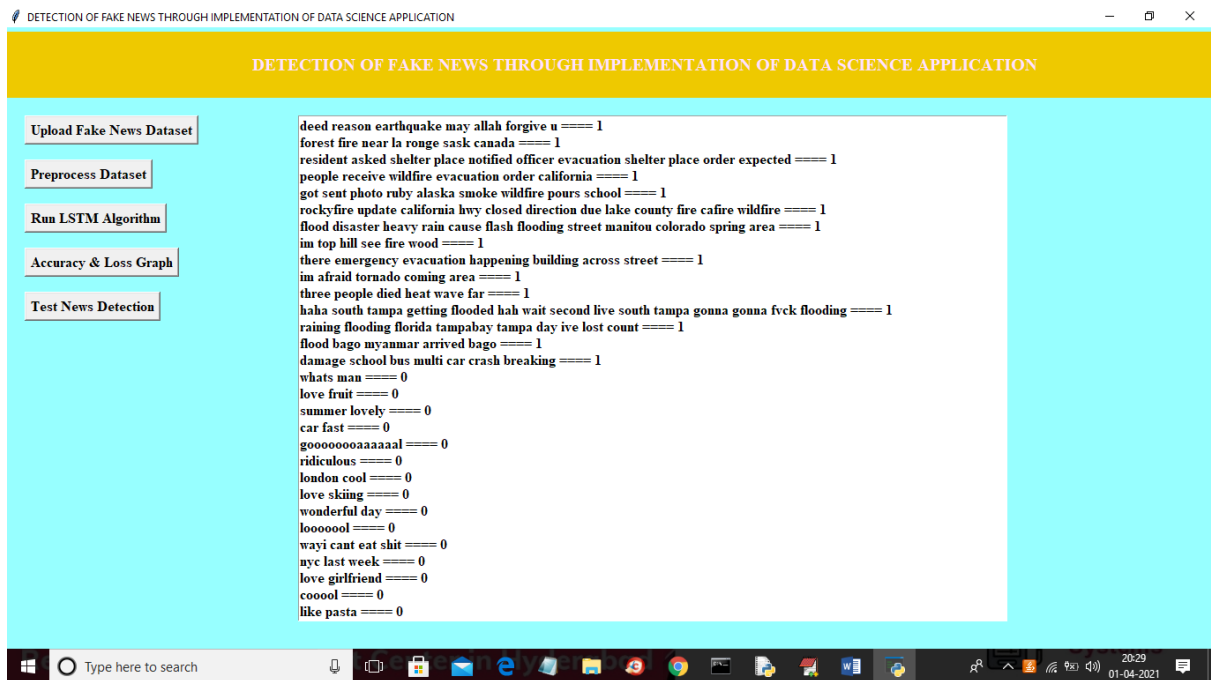
RESULTS: To run project run 'python main.py' to get below screen



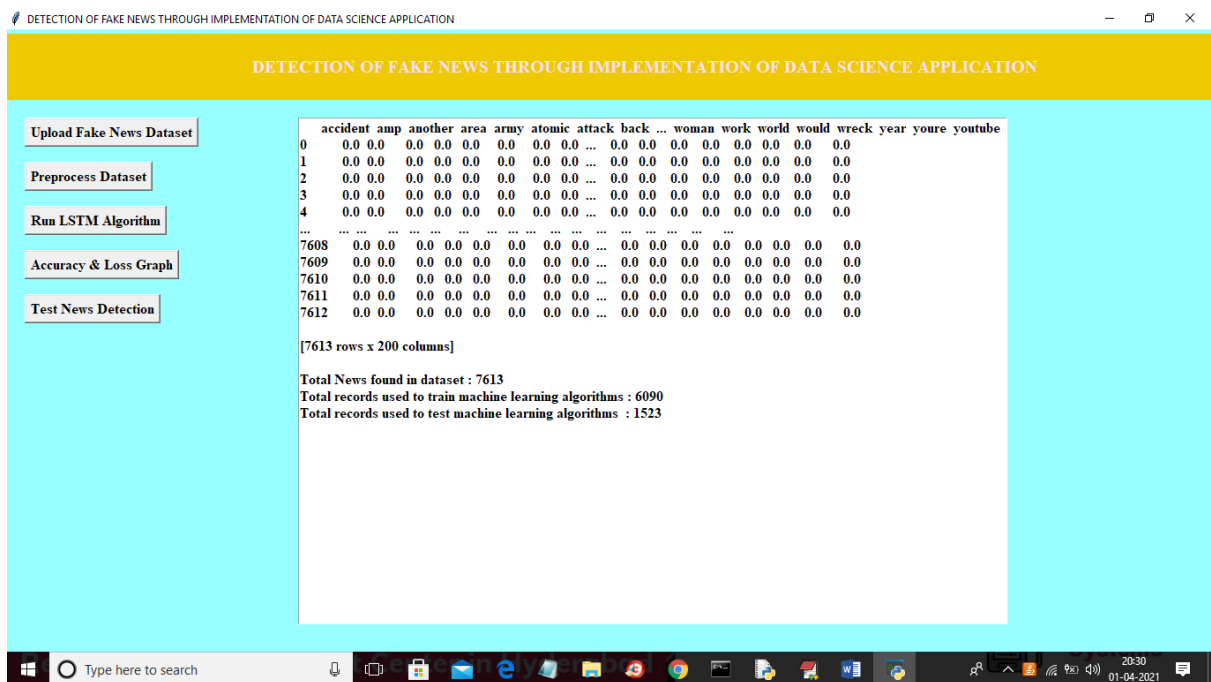
In above screen click on 'Upload Fake News Dataset' button to upload dataset



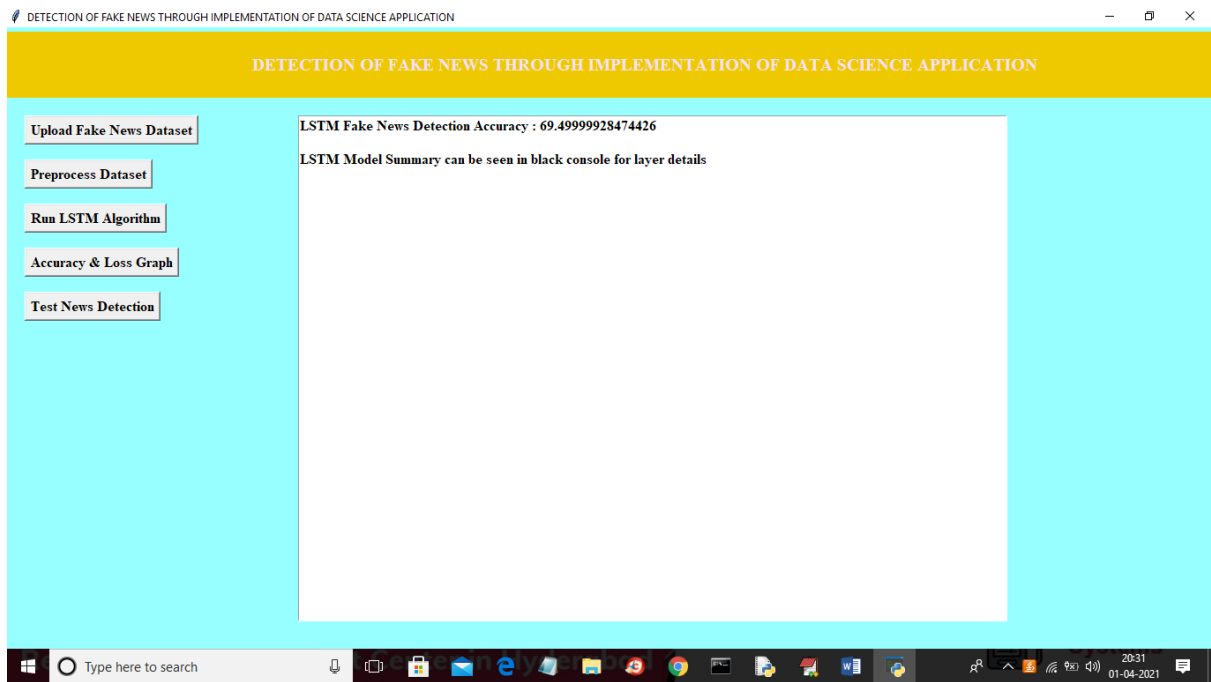
In above screen selecting and uploading 'news.csv' file and then click on 'Open' button to load dataset and to get below screen



In above screen dataset loaded and then in text area we can see all news text with the class label as 0 or 1 and now click on 'Preprocess Dataset & Apply NGram' button to convert above string data to numeric vector and to get below screen



In above screen all news words put in column header and if that word appear in any row then that rows column will be change with word count and if not appear then 0 will be put in column. In above screen showing some records from total 7612 news records and in bottom lines we can see dataset contains total 7613 records and then application using 80% (6090 news records) for training and then using 20% (1523 news records) for testing and now dataset is ready with numeric record and now click on 'Run LSTM Algorithm' button to train above dataset with LSTM and then build LSTM model and then calculate accuracy and error rate



In above screen LSTM model is generated and we got its prediction accuracy as 69.49% and we can see below console to see LSTM layer details

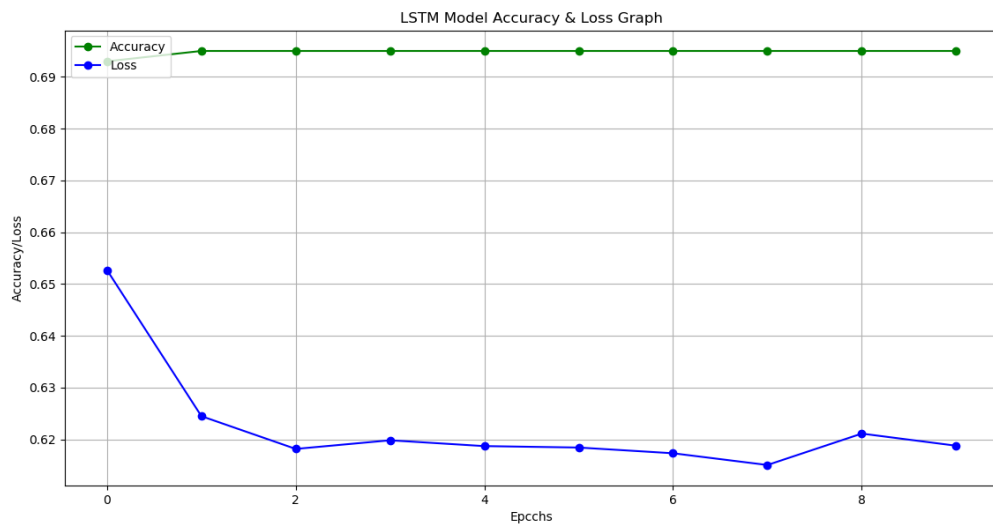
```

C:\Windows\system32\cmd.exe
[0]
(7613, 1)
(7613, 200, 1)
WARNING:tensorflow:From C:\Users\Admin\AppData\Local\Programs\Python\Python37\lib\site-packages\keras\backend\tensorflow_backend.py:422: The name tf.global_variables is
deprecated. Please use tf.compat.v1.global_variables instead.
Model: "sequential_1"
Layer (type)                Output Shape                Param #
-----
lstm_1 (LSTM)                (None, 500, 128)           66560
dropout_1 (Dropout)          (None, 500, 128)           0
lstm_2 (LSTM)                (None, 128)                 131584
dropout_2 (Dropout)          (None, 128)                 0
dense_1 (Dense)              (None, 32)                  4128
dropout_3 (Dropout)          (None, 32)                  0
dense_2 (Dense)              (None, 2)                   66
-----
Total params: 202,338
Trainable params: 202,338
Non-trainable params: 0
None

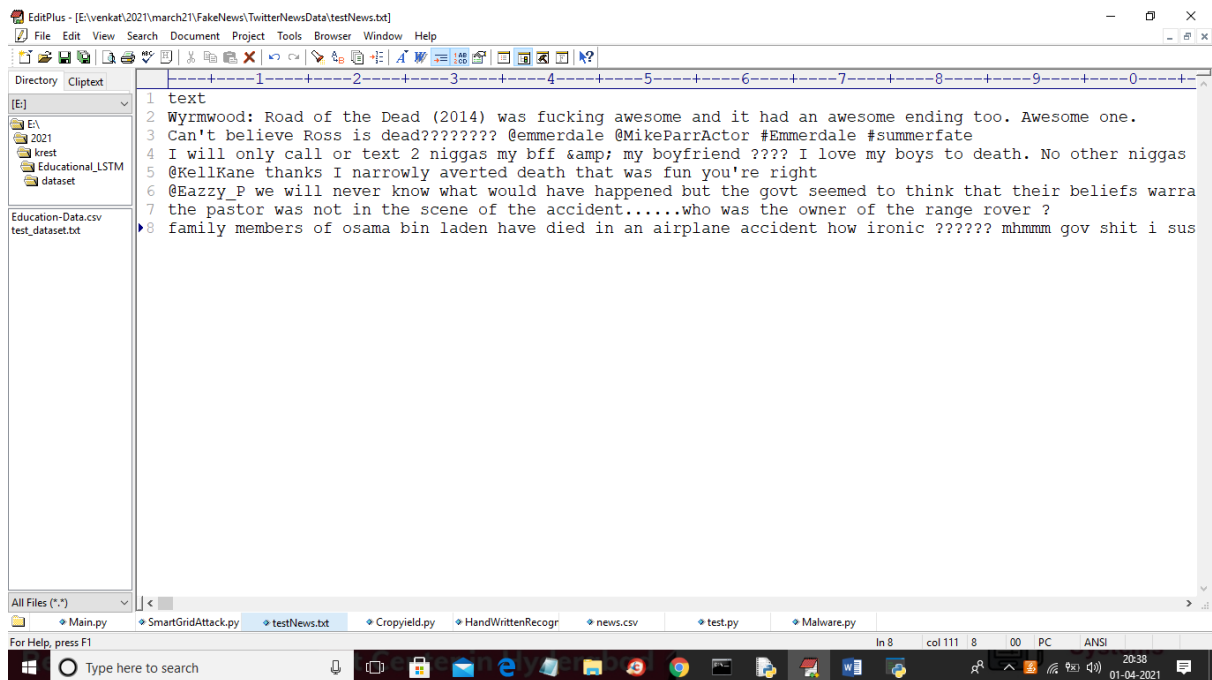
```

In above screen different LSTM layers are created to filter input data to get efficient features for prediction. Now click on 'Accuracy & Loss Graph' button to get LSTM graph

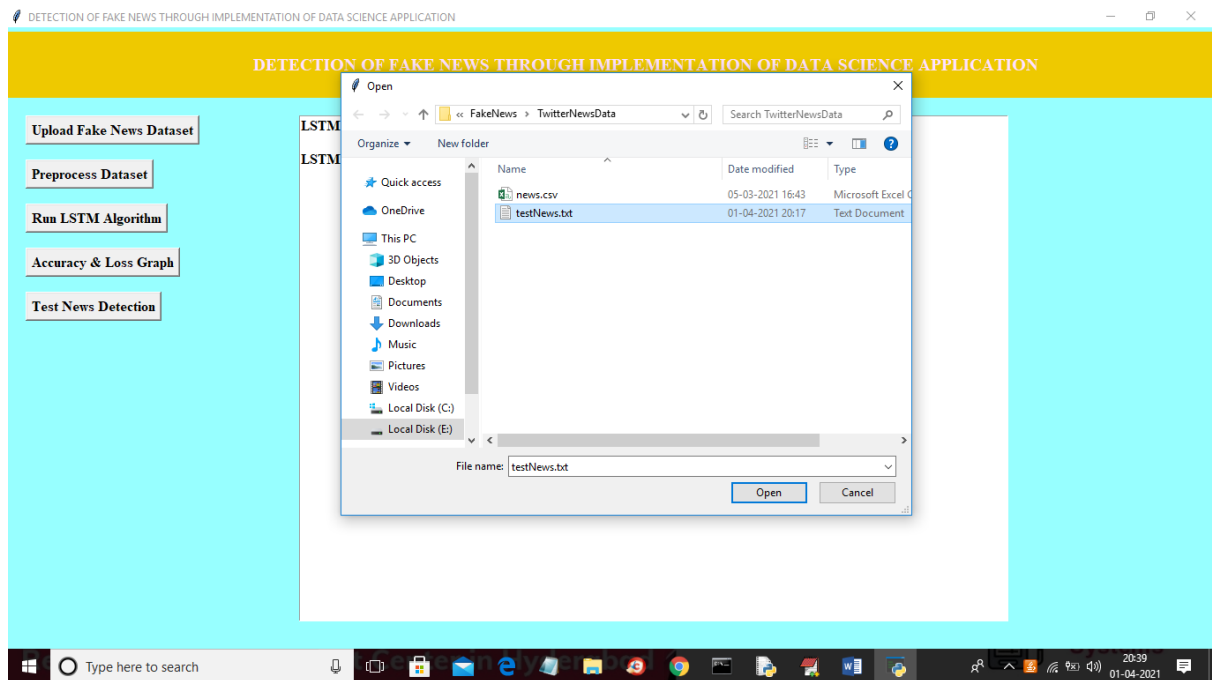
Figure 1



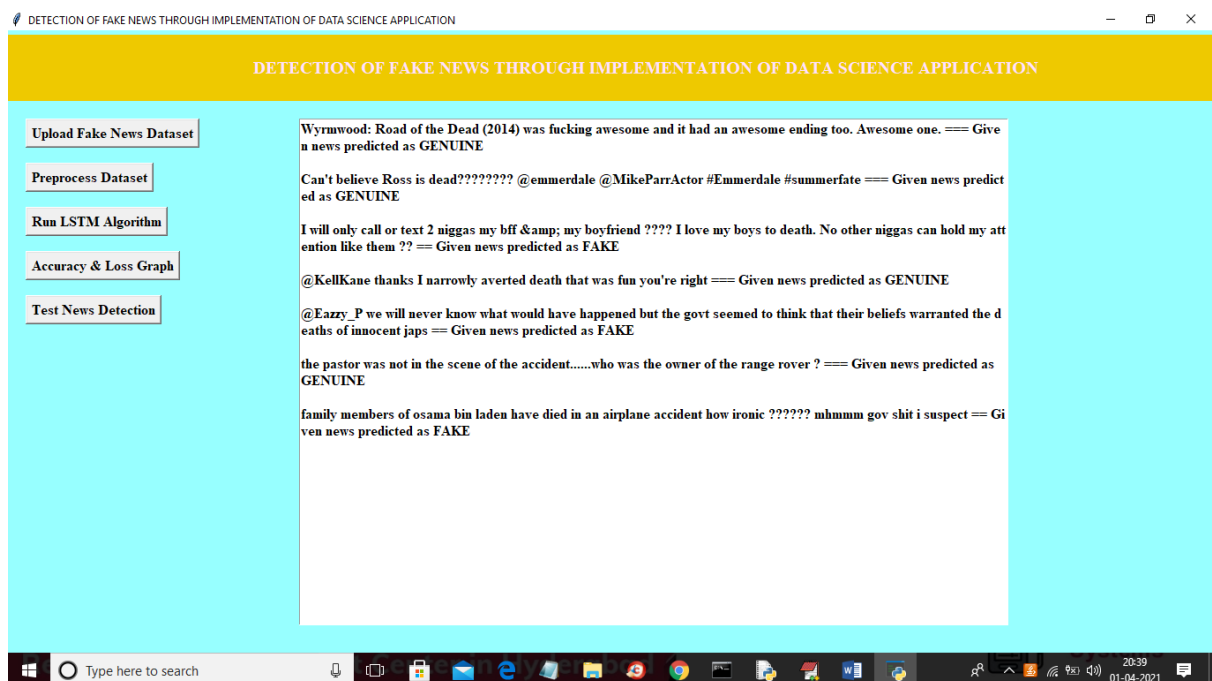
In above graph x-axis represents epoch/iterations and y-axis represents accuracy and loss value and green line represents accuracy and blue line represents loss value and at each increasing epoch loss values get decrease and accuracy reached to 70%. Now click on 'Test News Detection' button to upload some test news sentences and then application predict whether that news is genuine or fake. In below test news dataset we can see only TEXT data no class label and LSTM will predict class label for that test news



In above screen in test news we have only one column which contains only news 'TEXT' and after applying above test news we will get prediction result



In above screen selecting and uploading ‘testNews.txt’ file and then click on ‘Open’ button to load data and to get below prediction result



In above screen before dashed symbols we have news text and after dashed symbol application predict news as ‘FAKE or GENUINE’. After building model when we gave any news text then LSTM will check whether more words belongs to genuine or fake category and whatever category get more matching percentage then application will predict that class label.