Deep Learning with Tweet Sentiment

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Agenda

- Problem
- Data
- Technique
- Refinement
- Conclusions

Problem

- Sentiment Analysis to find trend across different **asset class**
- Create a scoring system using tweets for each asset class

Data

- Import data from twitter using API
- Data sample is approximately 35,000 tweets
- Asset class : Crude oil, Gold, Nifty50, Dow Jones
- Preparing metric based on count of positive/negative word
- Metric form -2 to 2, excluding neutral

Technique

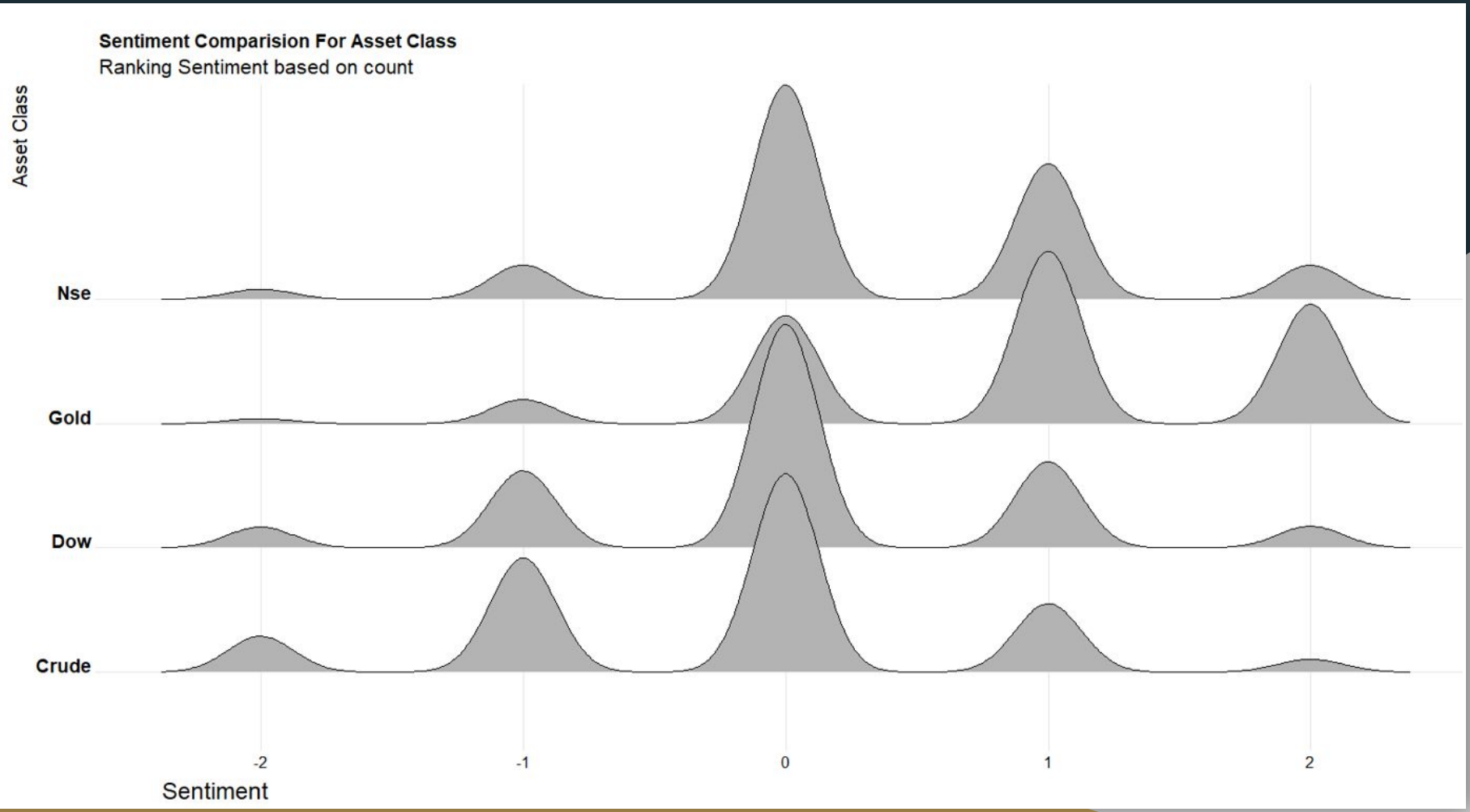
- Metric used as labels for building model
- Word level one-hot encoding
- Technique used
  - Feed forward neural network
  - Recurrent neural network
  - Long short term memory
- Compiling based on "rmsprop","categorical_crossentropy"and"accuracy"
- Validation and test

Refinement

Model	Test_Loss	Test_Accuracy in %
Feed Forward	1236.15	40.7
RNN	2.9	51.7
LSTM	2.27	53.7

Conclusions

- Model used for further improvement will be **LSTM** which lower loss and raise accuracy
- Additional data to train model
- Hypertuning training parameter
- Better infrastructure


Sentiment Comparision For Asset Class
Ranking Sentiment based on count
Asset Class
Nse
Gold
Dow
Crude
-2
-1
0
1
2
Sentiment

Relative Return Comparison in Percentage Across Asset Class