

Exploring Community Sentiments through Natural Language Processing (NLP)

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PROBLEM STATEMENT

TO UTILIZE NATURAL LANGUAGE
PROCESSING (NLP) TECHNIQUES FOR
COMMUNITY CLASSIFICATION AND TO
ANALYZE SENTIMENTS WITHIN
PARTICULAR COMMUNITIES.

- | | | | |
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| 01 | Introduction | 02 | Classification |
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NLP

INVESTMENT ANALYSIS

NLP MODELS:
TF - IDF +
LOGISTICAL REGRESSION
AND RANDOM FOREST

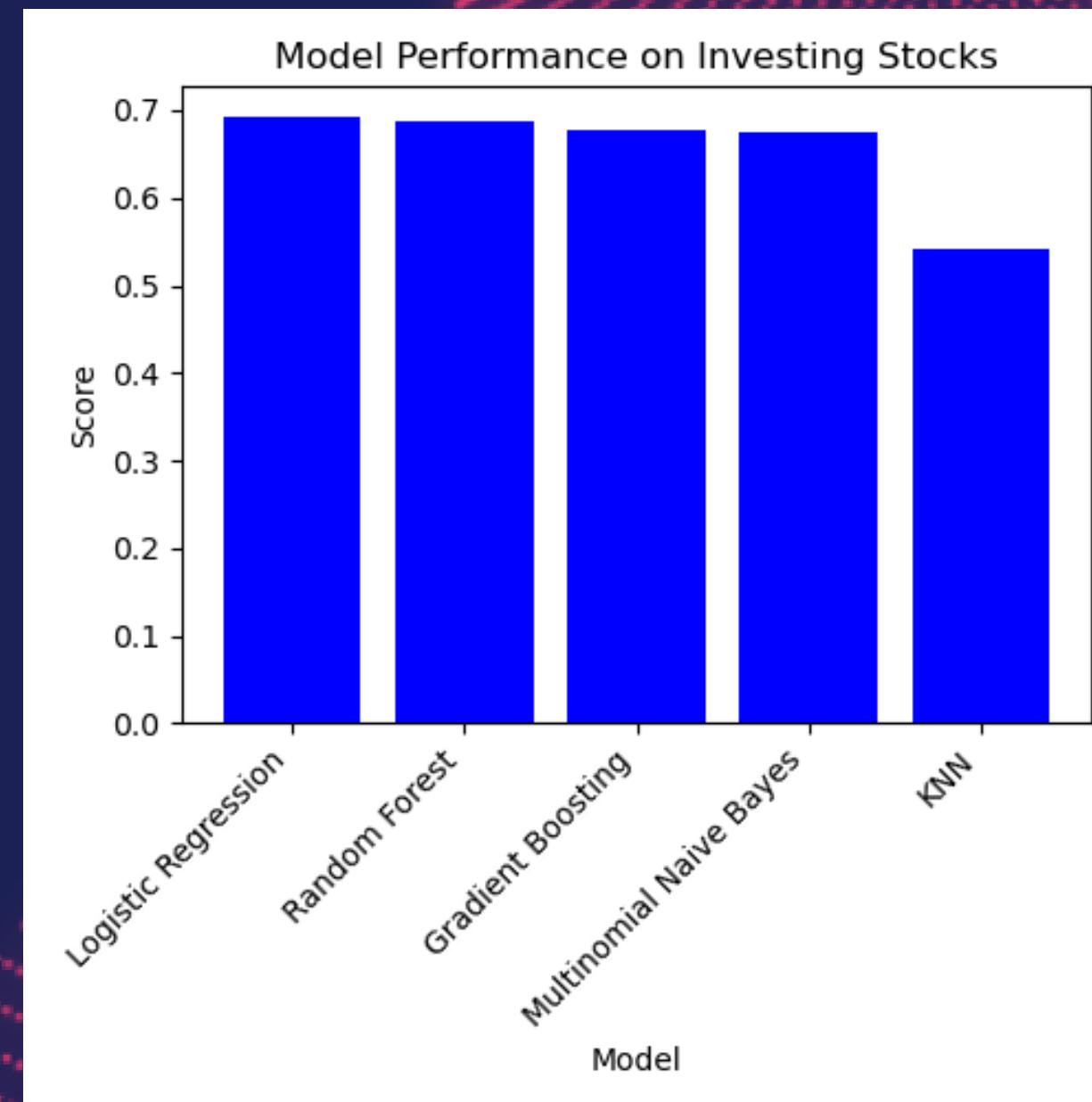
Subreddits:

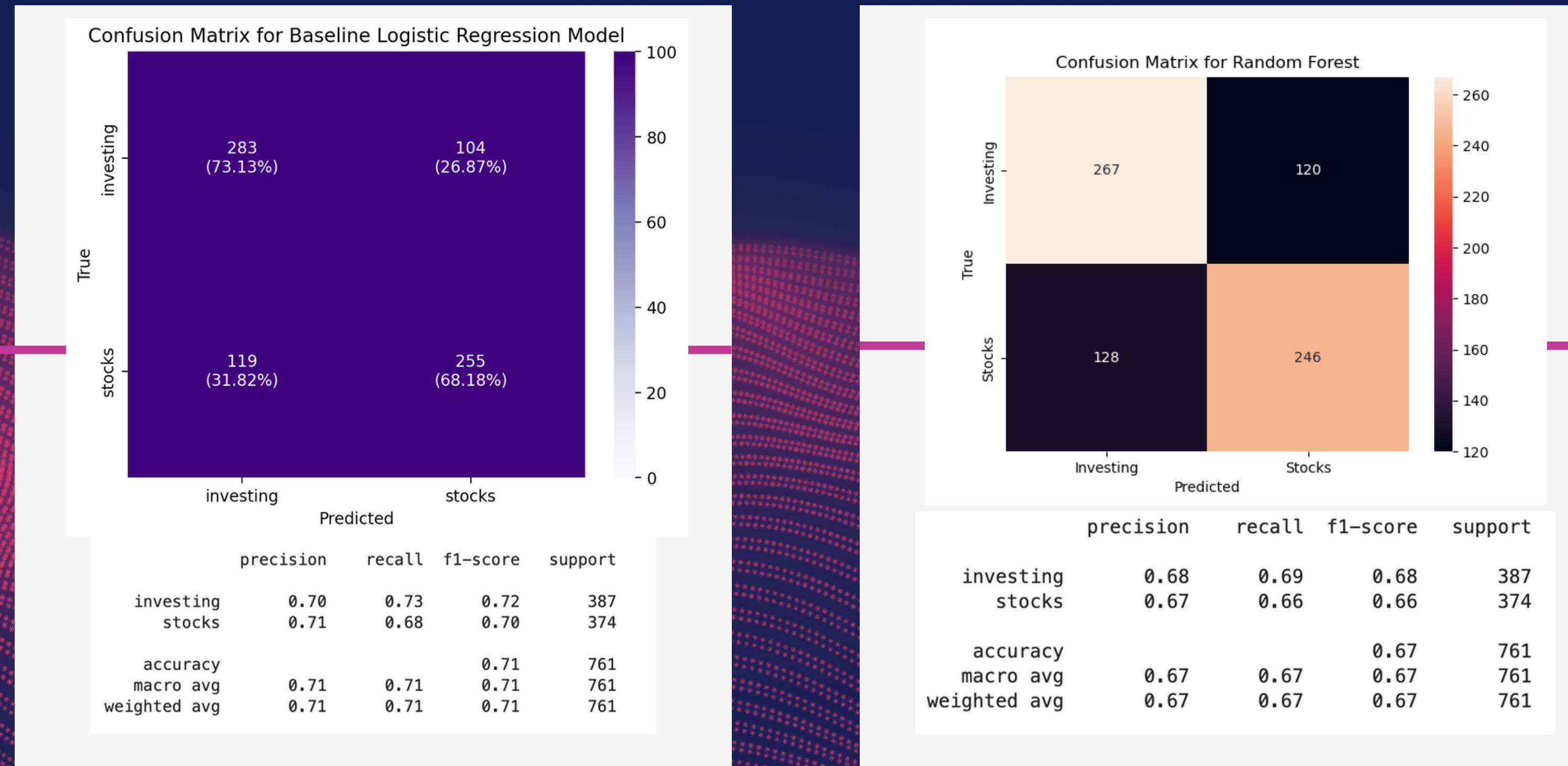
[r/investing](#)

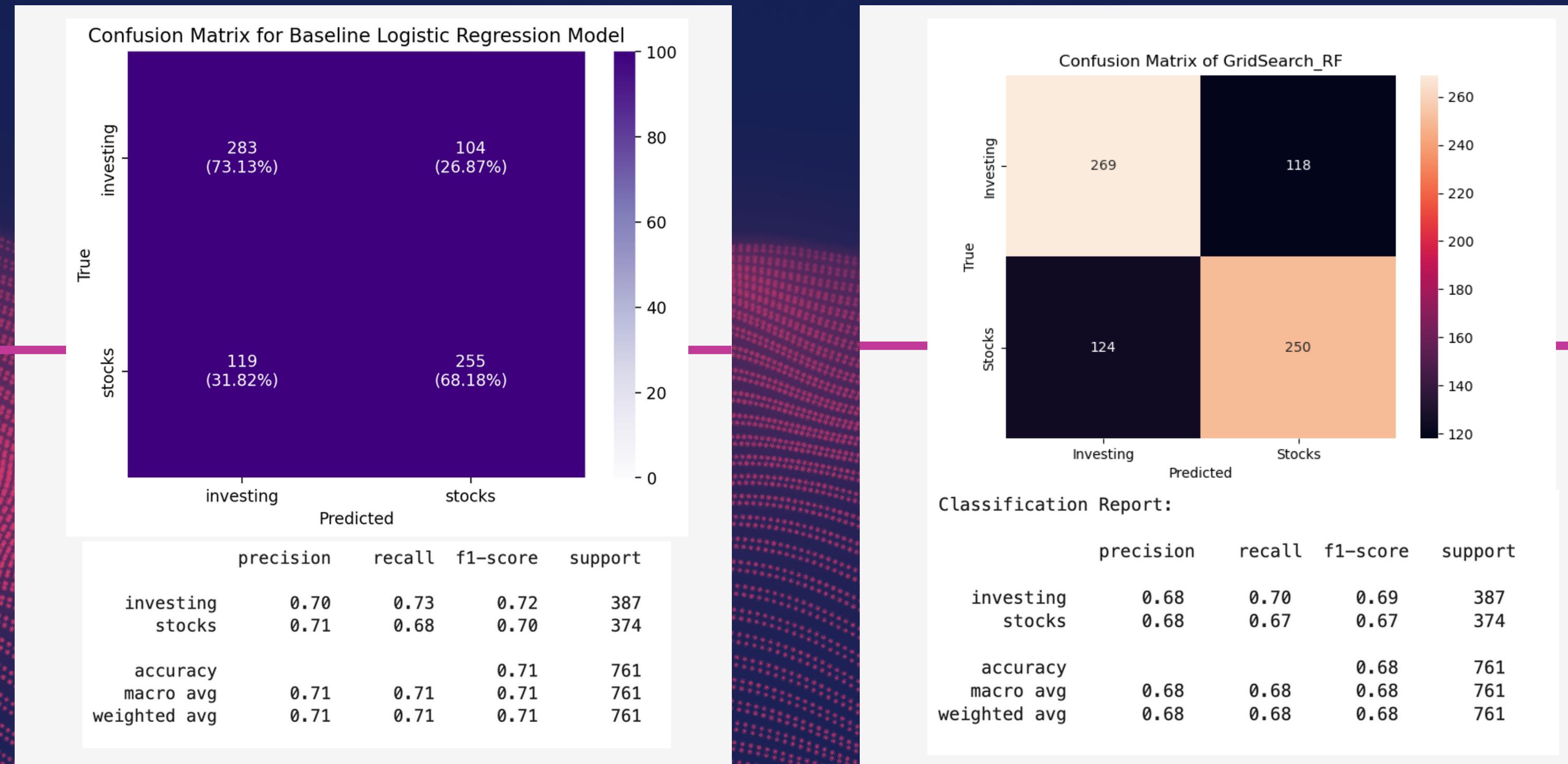
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MODEL

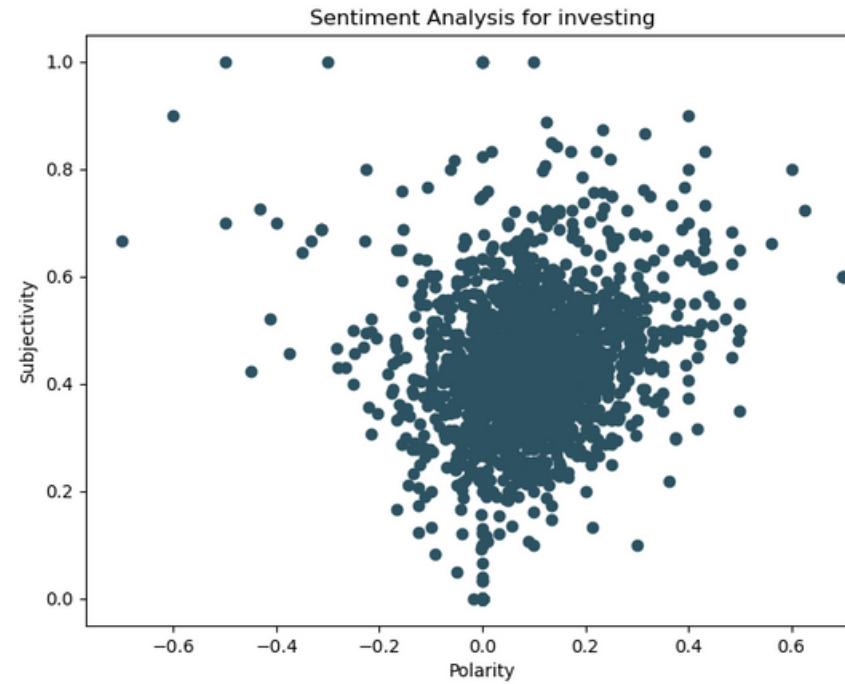
MODEL	Value
Logistic Regression	0.692201
Random Forest	0.687600
Gradient Boosting	0.677733
Multinomial Naive Bayes	0.675761
KNN	0.541597



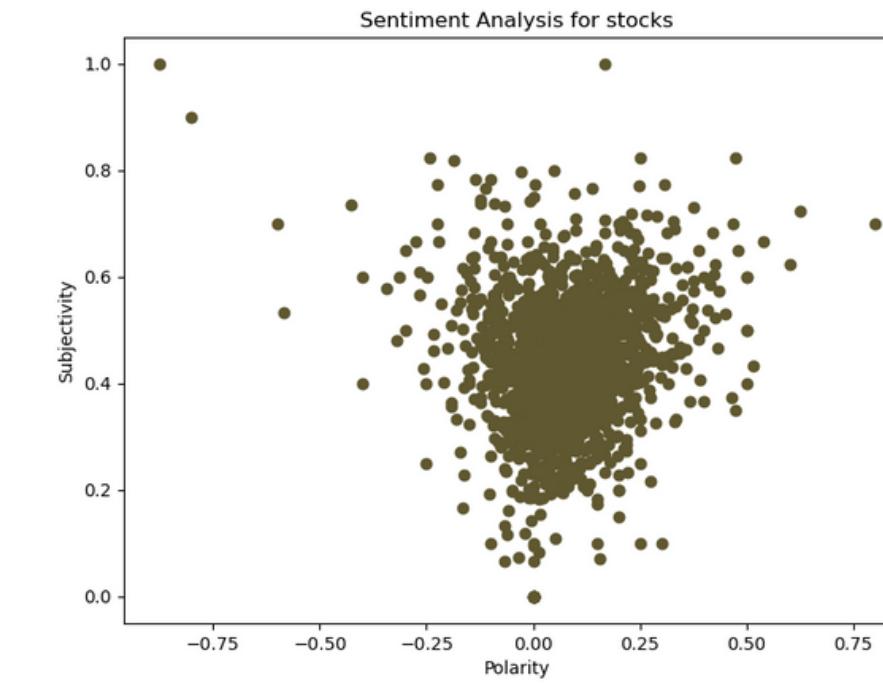
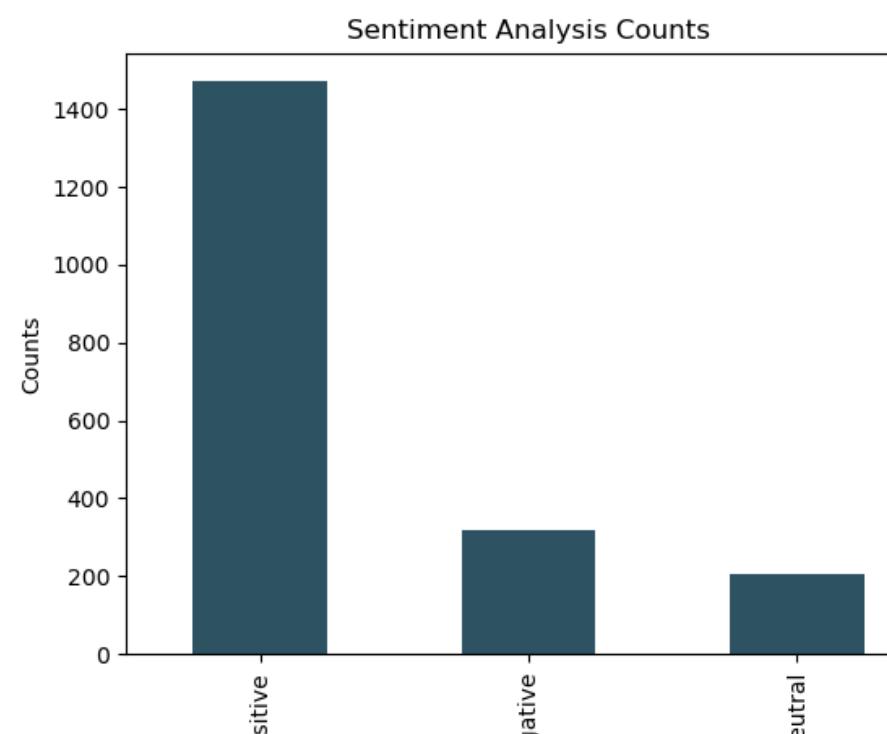




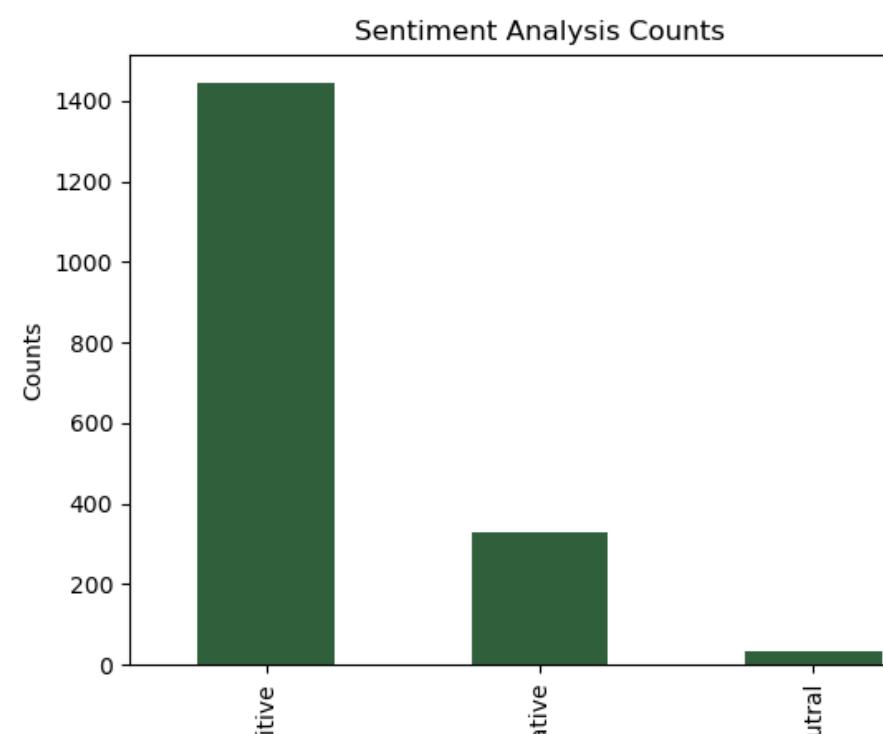
Investing Stocks

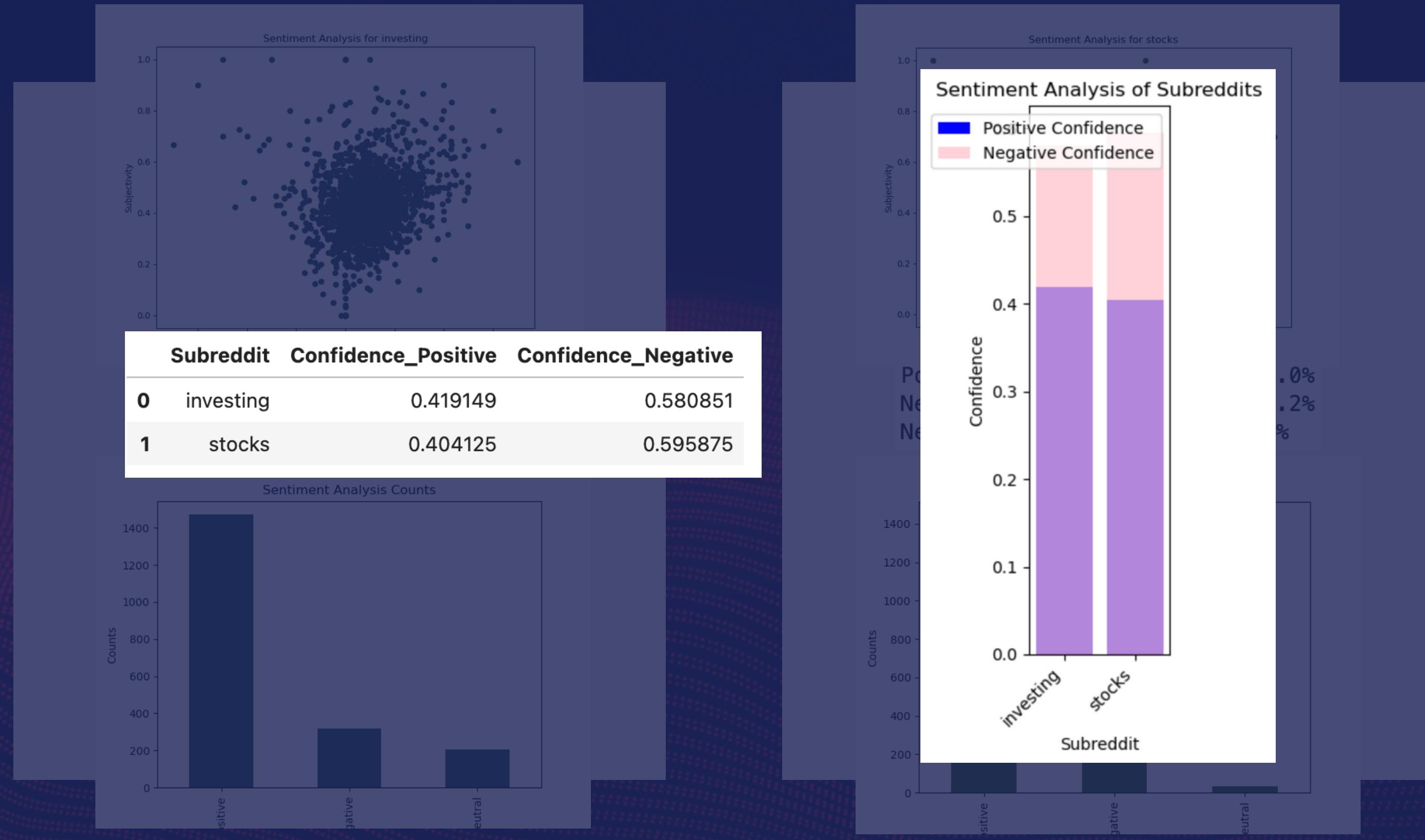


Positive Posts Percentage: 73.6%
Negative Posts Percentage: 16.0%
Neutral Posts Percentage: 10.4%



Positive Posts Percentage: 80.0%
Negative Posts Percentage: 18.2%
Neutral Posts Percentage: 1.8%





Word Cloud

Top influencing words Investing

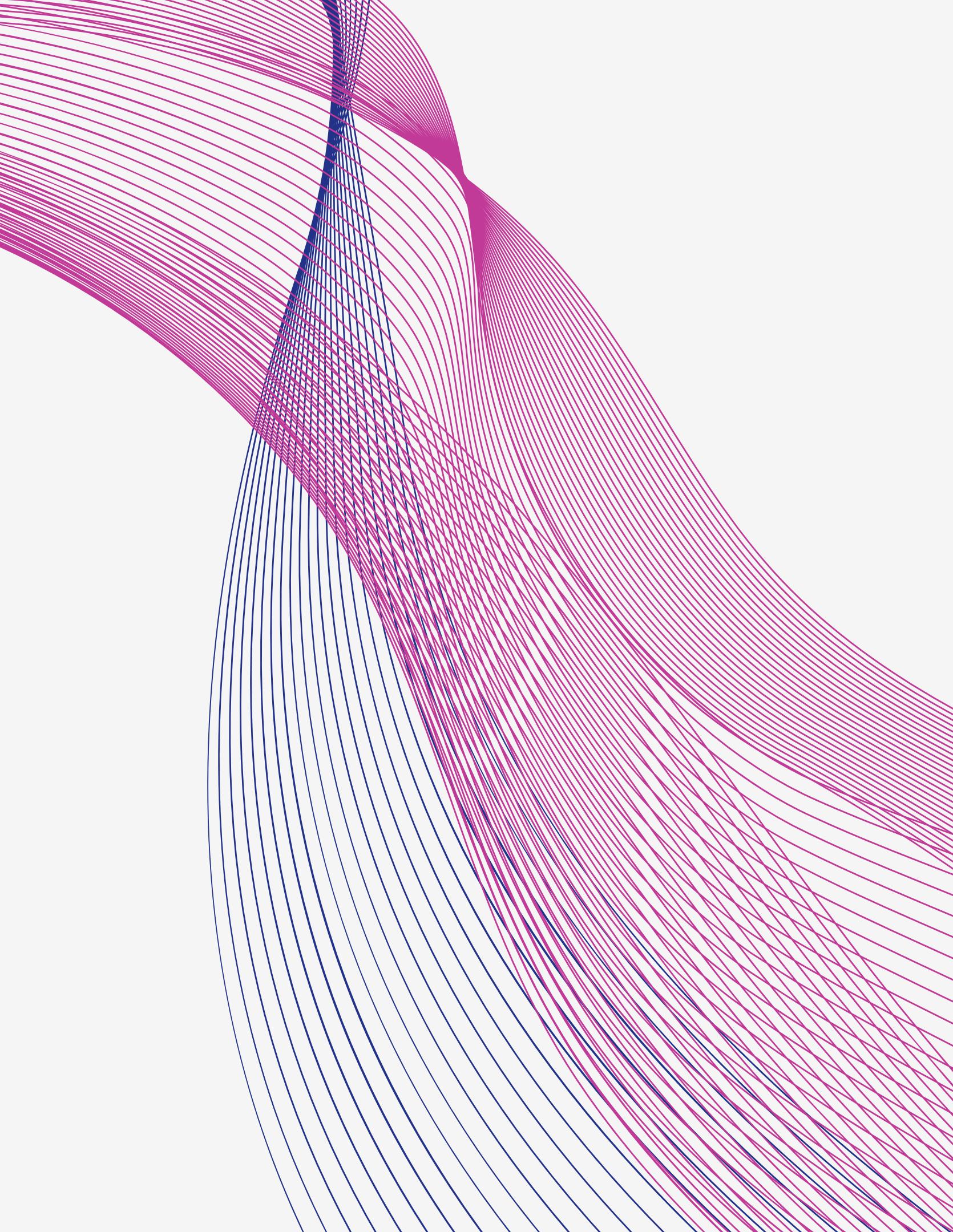


Top influencing words Stocks



Word Cloud of Both Subreddits





CONCLUSION

1. Choose models trained on extensive datasets instead of exclusively prioritizing commonly used words.
2. Before making conclusions, take into account the consistency of model outputs for sentiment analysis.
3. Acknowledge that combined sentiments may not accurately represent the sentiment of the entire community.



THANK YOU !

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