**Prompt:**

In financial markets, information is key. However, in the complex markets of the present, information is consumed by algorithms instantly. Can you gain an edge on the market through sentiment analysis?

**Directions:**

1. Exploratory Analysis - Look through the dataset for things that catch your eye. What proportion of responses are negative, positive, and neutral? Do you see any imbalances in the data? What else do you find? Please provide charts and visualizations to support your claim.
2. Feature Engineering - Do you need to make any changes to “Sentence” to make it more digestible for your model? Will you make any restrictions to your sample? Even if you don’t choose to make any changes to the data, please describe your reasoning.
3. Model Building - Create a NLP model that uses the “Sentence” as an input, using “Sentiment” as labels. Ideally, you will compare the results of several different models to find the optimal choice. What led you to choose your final model? Did you run into any roadblocks? Please describe your process in depth. Make sure to train your model on the training set only.
4. Model Testing - Please report the performance of your model on the training set. How does your model perform? Please report your accuracy and F1 score. Also, using the test set, please provide a CSV of your predicted values for “Sentiment” with your submission.
5. Prepare a report containing your results from the analysis. It should contain the following: Intro, data cleaning/pre-processing, visualizations (at least 3), analysis/results, conclusion/future improvements.

**Notes:**

1. These are the baseline requirements, but the best projects will go above and beyond. Do your best to rise above the competition!
2. Please be aware that your predictions must be generated using the feature available in the test set.