

# Commodity Forecasting

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# Research Question

Commodities are raw materials that are used and traded by millions of people everyday. Their price movements are dependant on the shifts in supply and demand. These fluctuations in prices have an effect on the global economy and the stock market. These assets are traded directly with cash and indirectly though futures and stocks.

We wanted to use machine learning models to analyze different historical data sets to predict future shifts in price movements of individual commodities as well as sentiment analysis and commodity correlation.

# Two Models

## LSTM Deep Learning

- The Long short term memory model takes the sequential data through as an input and decides its relevance and weights or either forgets it before being passed on through the next stage and on to the output.

## NLP and ARIMA modeling

- NLP runs through articles from different news sources, then a Vader Sentiment Analysis is done categorizing the positivity, negativity, and neutrality of the text.
- An ARIMA model is used to look at the relationship between the commodities

# LSTM Deep Learning Forecast Demo

# NLP & ARIMA Demo