Use Case

Artificial Intelligence : Training AI to predict oil prices

- An oil refiner with considerable exposure to crude oil and petroleum product prices was interested in using Artificial intelligence (AI) to improve profitability
- The refiner had access to historical daily prices of the last 25 years and they were using current refinery shutdown and maintenance data in an effort to predict prices of various crude oil grades
- The data was being fed into their refinery economic model
- As a next step, they were looking to augment their predictive capabilities for (1) managing inventory price risk (2) speculative trades in WTI and Brent benchmarks by using an AI algorithm

X36 Falcon scope of work :

- The refiner wanted us to help them in training the algorithm
- In response, our design team (which has a few derivative traders) took a decision to focus only on predicting large market moves (above US \$ 5 /Bbl). Accordingly, we <u>focused on just 4 oil price drivers</u> based on our extensive knowledge of what moves markets apart from inventories, OPEC spare capacity etc :
- 1. Geopolitical events
- 2. Global weather patterns & American continental weather systems
- 3. Sudden developments in the energy Industry
- 4. Correlations with other asset classes

In addition we also devised a <u>Ju Jitsu hedging strategy</u> using options and swaps to help them stabilize & enhance their cash flow.

The refiner has executed a few large trades based on our inputs.





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