IDEATION

Crude oil is the world’s leading fuel, and its prices have a big impact on the global environment, economy as well as oil exploration and exploitation activities.

Oil price forecasts are very useful to industries, governments and individuals. Although many methods have been developed for predicting oil prices, it remains one of the most challenging forecasting problems due to the high volatility of oil prices.

In this paper, we propose a novel approach for crude oil price prediction based on a new machine learning paradigm called stream learning.

The main advantage of our stream learning approach is that the prediction model can capture the changing patternof oil prices since the model is continuously updated whenever new oil price data are available, with very small constant overhead.

To evaluate the forecasting ability of our streaming learning model, we compare it with three other popular oil price prediction models.

The experiment results show that our stream learning model achieves the highest accuracy in terms of both mean squared prediction error and directional accuracy ratio over a variety of forecast time horizons.

The crude oil price has a huge impact on the world's economy. From the past few years, crude oil price fluctuates more than any other commodities prices. As the crude oil price depends on several external factors and there is high volatility predicting crude oil prices is very challenging. Long Short-Term Memory (LSTM) based on a recurrent neural network has shown better results in predicting prices that have high volatility. By utilizing this model, the significant crude oil price is evaluated and modelled. The exhibition of the proposed model is assessed by utilizing the valuable information in the WTI unrefined petroleum markets. The exploratory results show that the proposed model achieves increments in the expected precision of results.

Crude oil is amongst the most important resources in today’s world, it is the chief fuel and its cost has a direct effect on the global habitat, our economy and oil exploration, exploitation and other activities. Prediction of oil prices has become the need of the hour, it is a boon to many large and small industries, individuals, the government.