

Literature Survey

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1	Paper title	Crude Oil Price Prediction Using Deep Learning
	Problem definition	Predict the crude oil prices and evaluate the model
	Methodology/ Algorithm	Using LSTM(Long Short Term Memory) ,RNN(Recurrent Neural Network) based on deep learning
	Advantages	<ul style="list-style-type: none"> • The model is assessed by utilizing the valuable information in the WTI unrefined petroleum markets • The model achieves increments in the expected precision of results
	Disadvantages	The crude oil price depends on several external factors and high volatility

2	Paper title	Multi-step-ahead Crude Oil Price Forecasting Based on Autoregressive Integrated Moving Average and Improved Optimization enhanced Gated Recurrent Unit
	Problem definition	Crude oil price volatility has a strong influence on the stability of the global energy market. Therefore, both traders and policy makers have been interested in the accurate forecast of crude oil price so as to prevent large losses and to stabilize the market
	Methodology/ Algorithm	Using ARMA, IPSO, GRU
	Advantages	<ul style="list-style-type: none"> ● To prevent large losses and to stabilize the market ● Crude oil spot prices covering a period of 714 days ● For twenty-step forecasting, the overall reduction of RMSE is as much as 53%, which significantly raises the prediction accuracy.

	Disadvantages	In the overall reduction of RMSE is not an 100%, only 53% prediction accuracy was raises for 20th step forecasting
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3	Paper title	A Novel Hybrid Approach with A Decomposition Method and The RVFL Model for Crude Oil Price Prediction
	Problem definition	Volatility of international crude oil prices is influenced by various external factors on different time scales. User search data (USD) which reflects investor attentions has been widely researched and proved to be associated with crude oil price change at different frequency bands.
	Methodology/ Algorithm	Random vector functional link (RVFL) ,Bivariate empirical mode decomposition (BEMD)
	Advantages	<ul style="list-style-type: none"> • Third, Brent crude oil spot price is used to test the proposed approach empirically

		<ul style="list-style-type: none"> ● Forecasting results are analyzed with various evaluation criteria and verified robustness.
	Disadvantages	The proposed approach statistically outperforms traditional forecasting machine learning techniques and similar counterparts (with USD or EMD-based method) in terms of prediction accuracy.

4	Paper title	Forecasting Crude Oil Price Using Event Extraction
	Problem definition	Econometric Variable Prediction Problem
	Methodology/ Algorithm	Event Extraction Algorithm

	Advantages	<ul style="list-style-type: none"> • It uses textual contents and relation between entities • High quality features
	Disadvantages	Crude oil prices are largely influenced by various factors, such as economic development, financial markets, conflicts, wars, and political events.

5	Paper title	Predictive Analytics for Crude Oil Price Using RNN-LSTM Neural Network
	Problem definition	This study aims to certify the capability of a prediction model built based on the RNN-LSTM network to predict the future price of crude oil.
	Methodology/ Algorithm	Using Recurrent Neural Network and Long Short Term Network

	Advantages	<ul style="list-style-type: none">● The capability of the network to provide an improvement of the accuracy of crude oil price prediction● Millions of traders investing the crude oil prediction
	Disadvantages	<ul style="list-style-type: none">● It dynamic nature● It complex to predict the price of crude oil