## Brent Crude Oil Price Prediction App

### Usage:

1. \*\*Select Model\*\*: Choose one of the available models from the dropdown menu. The models include LSTM, GBR, XGBoost, SVR (Recommended), and ARIMA.

2. \*\*Raw Data\*\*: View the raw data fetched from Yahoo Finance, including Open, High, Low, Close, Volume, and Moving Averages (MA10, MA50, MA100).

3. \*\*Predictions\*\*: Based on the selected model, the app will display predictions for Brent Crude Oil prices. The predictions are plotted on a graph showing the predicted prices over time.

4. \*\*Future Predictions\*\*: Additionally, the app allows you to predict future prices for a specified number of days. Use the slider to select the number of days into the future you want to predict, and the app will display the predicted prices.

5. \*\*Image Display\*\*: The app includes a prediction graph image for visual reference. This graph provides a visual representation of the predicted prices.

6. \*\*Downloadable Document\*\*: For further reference, there is a downloadable document that contains detailed information about the app's usage and use cases. Click on the provided link to download the document.

### Use Cases:

1. \*\*Market Analysis\*\*: Traders and analysts can use the app to analyze historical and predicted crude oil prices, helping them make informed decisions in the market.

2. \*\*Forecasting\*\*: Energy companies and investors can utilize the app to forecast future trends in Brent Crude Oil prices, aiding in strategic planning and risk management.

3. \*\*Educational Purposes\*\*: Students and researchers can explore different machine learning and time series forecasting techniques implemented in the app for learning and research purposes.

4. \*\*Decision Support\*\*: Policy-makers and government agencies can use the app's predictions to inform energy policies and initiatives.

5. \*\*Risk Management\*\*: Businesses dependent on crude oil prices, such as transportation and manufacturing, can use the app to mitigate risks associated with price fluctuations by planning ahead based on predicted trends.

6. \*\*Comparative Analysis\*\*: Users can compare the performance of different machine learning models (LSTM, GBR, XGBoost, SVR, ARIMA) in predicting crude oil prices, gaining insights into which model performs best under various market conditions.

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Feel free to customize this document according to your app's specific features and target audience.