Models used in time series:

1. **ARIMA (AutoRegressive Integrated Moving Average):**

   - *Use:* For stationary time series data.

   - *Example:* Predicting monthly sales based on past sales data.

2. **Exponential Smoothing State Space Models (ETS):**

   - *Use:* For forecasting univariate time series data.

   - *Example:* Predicting weekly demand for a product based on historical sales.

3. **Prophet:**

   - *Use:* Developed by Facebook for forecasting with daily observations that display patterns on different time scales.

   - *Example:* Predicting daily website traffic.

4. **SARIMA (Seasonal ARIMA):**

   - *Use:* A seasonal extension of ARIMA for data with a clear seasonality pattern.

   - *Example:* Predicting quarterly earnings based on historical financial data.

5. **LSTM (Long Short-Term Memory) Neural Networks:**

   - *Use:* Deep learning model for sequence prediction, suitable for capturing long-term dependencies.

   - *Example:* Predicting daily stock prices.

6. **Prophet:**

   - *Use:* Developed by Facebook for forecasting time series data with daily observations that display patterns on different time scales.

   - *Example:* Predicting daily website traffic.

7. **GARCH (Generalized Autoregressive Conditional Heteroskedasticity):**

   - *Use:* For modeling volatility clustering often observed in financial time series.

   - *Example:* Modeling and forecasting stock market volatility.

8. **Holt-Winters Method:**

   - *Use:* For forecasting time series data with trends and seasonality.

- *Example:* Predicting monthly energy consumption considering both trend and seasonality.