**Business Questions for the Project of Stock Market prediction**

**1 till 5 Business Questions for the Backend and 6 till 9 Business Questions for the Frontend GUI**

**1. Which external factors (e.g., oil prices, foreign exchange rates) have the strongest correlation with KSE 100 index movements?**

* Crude oil prices and foreign exchange rates are strongly correlated with KSE 100 index movements. Specifically, fluctuations in oil prices impact energy stocks, while forex rates influence market sentiment, particularly for import/export-heavy sectors.

**2. How do trading strategies based on machine learning forecasts perform compared to those based on historical averages?**

* Machine learning-based strategies often outperform traditional methods, as they can identify complex patterns and adapt to real-time data, providing more accurate and dynamic forecasts compared to static historical averages.

**3. Can sector-based analysis improve the accuracy of KSE 100 Index forecasts?**

* Yes, sector-based analysis can enhance forecasting accuracy by isolating the performance of specific sectors like energy, banking, or technology, which may be more responsive to different market drivers and news events.

**4. What is the impact of trading volume spikes on future price movements in the KSE 100 Index?**

* Spikes in trading volume often precede significant price movements, as they reflect strong investor sentiment, news events, or market reactions. Increased volume can signal trend reversals or acceleration in price movements.

**5. Which time horizons (daily, weekly, monthly) yield the most reliable forecasts for the KSE 100 Index?**

* Weekly and monthly time horizons tend to provide the most reliable forecasts, as they smooth out daily volatility and highlight longer-term market trends, offering clearer insights into potential future movements.

**6. Trend of close prices**

* The trend of KSE 100 close prices can be analyzed using line charts, which reveal upward, downward, or sideways market trends, helping identify market sentiment and long-term behavior.

**7. Relationship of close prices with other leading factors**

* Close prices show a strong correlation with key factors such as crude oil prices and forex rates. For example, rising oil prices often coincide with higher stock prices in energy sectors, providing a clear indication of external influences on the market.

**8. Frequency of highs and lows of close prices**

* A histogram can display the frequency of highs and lows of KSE 100 close prices, helping identify periods of high volatility and offering insights into market stability and investor behavior.

**9. Trading volume was high when close prices were high?**

* A scatter plot can highlight the relationship between trading volume and close prices, typically showing that high trading volumes are often associated with rising close prices, reflecting increased market confidence or major events impacting stock prices.