STOCK PRICE PREDICTION

Stock Price Prediction & Analysis

**Overview**

This project is a **Stock Price Prediction & Analysis** tool built using **Streamlit**. It allows users to fetch stock data, analyze trends, calculate profit/loss, and perform sentiment analysis based on recent stock news.

**Features**

* Fetches historical stock data from **Yahoo Finance**.
* Calculates moving averages (**Daily, Weekly, Monthly, SMA 50, SMA 200**).
* Displays stock price trends using **interactive charts**.
* Analyzes stock sentiment using **VADER Sentiment Analysis**.
* Provides **trading signals** based on stock trends.
* Includes a **Profit/Loss Calculator** to evaluate investments in Indian Rupees (₹).

**Requirements**

Ensure you have the following Python libraries installed:

pip install streamlit yfinance plotly nltk requests pandas numpy

**How to Run**

1. Clone this repository or download the script.
2. Open a terminal and navigate to the project folder.
3. Run the following command:
4. streamlit run stock\_prediction.py
5. Open the provided **localhost URL** in your browser.

**API Keys**

This project uses **NewsAPI** for fetching stock-related news articles. Replace your own API key in stock\_prediction.py with a valid API key from [NewsAPI](https://newsapi.org/).

**Usage**

1. **Select a Stock** from the dropdown.
2. **Choose a Date Range** for analysis.
3. **View Stock Data** and Moving Averages.
4. **Analyze Stock Sentiment** based on recent news.
5. **Check Trading Signals** (Buy, Sell, Hold).
6. **Use the Profit/Loss Calculator** to estimate investment returns.