

Title:

Decoding Stock Price Fluctuation

Description:

The main reasons for Stock Price fluctuations are:

- Demand and Supply
- Company Performance and Earnings
- Economic Indicators
 - Interest Rates
 - Inflation
 - Gross Domestic Product (GDP)
 - Unemployment Rate
 - Consumer Confidence Index (CCI)
 - Consumer Price Index (CPI)
- Global & Political events
- Technological changes
- Market Sentiment
- Currency Exchange Rates
- Government Debt and Deficit

Software Requirements

- Machine Learning Algorithms:
 1. Regression
 2. Long Short-Term Memory (LSTM)
 3. Random Forest
 4. Support Vector Machines (SVM)
 5. K-Nearest Neighbours (KNN)
 6. Decision Tress
 7. Correlation
- Tests:
 1. Dickey-Fuller Test
 2. Granger - Causality Test
 3. Phillips-Perron (PP)Test
 4. KPSS (Kwiatkowski, Phillips, Schmidt, and Shin) Test
 5. Ng and Perron (NP) Tests
- Programming Language:
 1. Python (for data analysis and modeling)
- Data Analysis Libraries:
 1. Pandas: For data manipulation
 2. NumPy: For numerical computations.

3. matplotlib and seaborn:

For data visualization.

4.scikit-learn: For implementing machine learning algorithms.

Abstract:

This project looks at how economic indicators, like interest rates and government debt, affect stock price changes. We use different machine learning algorithms, such as **linear regression, decision trees, and neural networks**, to analyze past data and find patterns. Our goal is to predict stock prices based on these economic factors. The results will help investors understand how changes in the economy can impact stock prices, leading to better investment choices. This research shows how machine learning can be a useful tool in studying financial markets.

Economic indicators are the heartbeat of the stock market, pumping life into investment decisions

Research Paper:

Economic Indicators And Stock Market

Machine Learning Algoritithms

Data Set:

Historical Data

Global Economic indicators data

India's Economic Growth

--Thank You Sir--

