Title of product

Stock Market Prediction Using Fractal Interpolation Functions

Entry Details/Product Description

The product is stock market prediction using fractal interpolation functions. This product is based on the Fractal Market Hypothesis (FMH). This hypothesis suggests that financial markets exhibit fractal properties, meaning that similar patterns repeat themselves across different time scales. Fractal interpolation functions, with their ability to capture self-similarity across scales, are thus seen as potentially useful tools for analyzing and predicting market behavior.

The importance of stock market prediction can be a complex and debated topic. While it holds immense potential, it's vital to understand both its benefits and limitations. Here are some key reasons why people seek and value stock market prediction:

Profit potential: Accurately predicting market movements can allow investors to make profitable trades, buying low and selling high. This is the primary motivator for many individuals and institutions involved in the market.

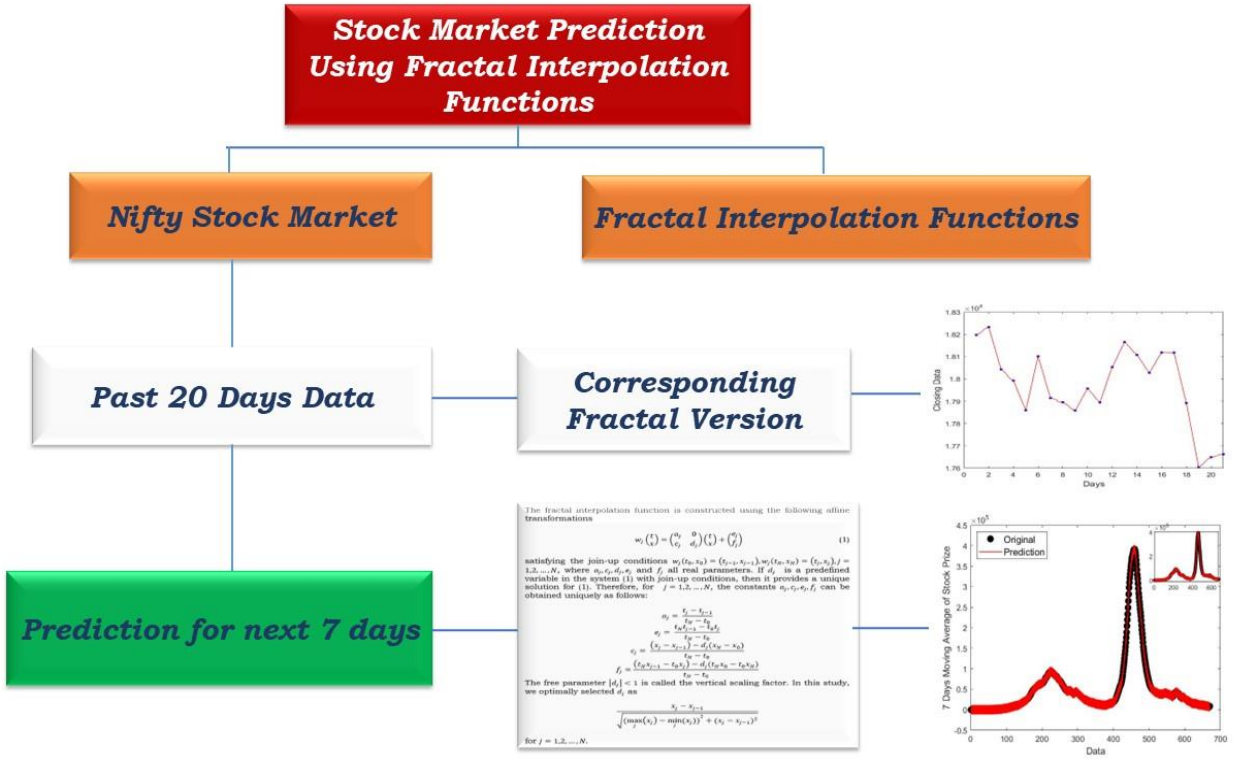
Informed investment decisions: Knowing the anticipated direction of a stock or the overall market can help investors make informed decisions about their portfolios. This includes allocating assets, diversifying holdings, and adjusting investment strategies based on predicted trends.

The challenge and complexity of predicting the market attract researchers and academics who study its dynamics and develop new forecasting methods. This ongoing research contributes to a deeper understanding of financial markets and their behavior.

Using fractal interpolation functions for stock market prediction requires careful consideration and a critical approach. While it holds the potential for capturing complex patterns and non-linear relationships, its limitations and dependence on data quality and parameter choice should not be underestimated. Combining fractal analysis with other methods and fundamental analysis can provide a more comprehensive and reliable approach to market prediction.

The closing data for Nifty is taken from the official website of the National Stock Exchange, and its fractal graph is illustrated in Figure. The website is given below
https://www.nseindia.com/resources/historical-reports-nifty-banknifty-index-data

Objectives



Status of Invention/Innovation

1. **A. Agathiyan**, A. Gowrisankar, Nur Aisyah Abdul Fataf, and Jinde Cao, *Remarks on the integral transform of non-linear fractal interpolation functions*, **Chaos, Solitons & Fractals, 2023.** https://doi.org/10.1016/j.chaos.2023.113749