S. no	Title or year	objective	Algorithm or technology used	advantages	limitations	dataset	metrices
1	"Stock Price Forecasting by Combining News Mining and Time Series Analysis" (2009)	To improve stock price forecasting by combining news mining with time series analysis.	NTF (News mining and Time series Forecasting) algorithm combining text mining techniques with TSA (Time Series Analysis).	Improved accuracy over standard TSA by 15%, works for both stock price values and trends.	Relies heavily on effective news mining and text preprocessing. Results may vary with different stock markets and languages.	Stock prices: Shanghai Stock Market (2008-2008). News data: RSS feeds from large portals like Baidu.	Average Absolute Difference Rate (d),Accumulated Absolute Difference Rate (dacu),Error Rate (e),Accumulated Error Rate (eacu)
2	Forecasting Tehran Stock Exchange Trend with Time Series Analysis, Fundamental Data, and Sentiment Analysis in News(2022)	To predict the trend of the Tehran Stock Exchange index by combining time series analysis, fundamental data, and news sentiment analysis.	Machine learning algorithms (SVR), Fourier Series, Sentiment Analysis (NLP), Time Series Analysis (TSA).	Combines multiple data sources (sentiment, fundamental factors, historical prices) to improve prediction accuracy, achieving 97% accuracy on training data and 84.78% on test data.	Complexity in preprocessing and tuning parameters, potential overfitting to specific market conditions.	Tehran Stock Exchange data, sentiment analysis from collected news (extracted using web scraping).	Mean Absolute Percentage Error (MAPE),Accuracy on Training Data,Accuracy on Test Data,Correlation with Fundamental Factors,Sentiment Polarity Index (NI)

3	A Comprehensive Review of Investor Sentiment Analysis in Stock Price Forecasting (2021)	To evaluate and synthesize the literature on investor sentiment analysis and its application in stock price forecasting.	Machine learning methods (SVM, NB, RF, LSTM, CNN, RNN), deep learning methods (SAEs, WT, LSTM).	Combines machine learning and deep learning for high prediction accuracy.	High complexity due to the use of hybrid models and unstructured data. Difficulty in dealing with sarcasm, ambiguity, and multipolarity in sentiment analysis.	Various datasets including financial social media platforms (Twitter, StockTwits, Sina Microblog, etc.).	Sentiment Polarity (Positive, Negative), Accuracy of classification algorithms (SVM, LSTM), Precision (up to 85%), Profitability performance.
4	Research on Stock Price Analysis and Forecasting of Listed Companies Based on Time Series and Neural Network Models(2023)	To study stock price fluctuations, explore time-varying correlations with regulations, and predict future stock prices using LSTM and ARIMA models	LSTM (Long Short-Term Memory), ARIMA (Auto-Regressive Integrated Moving Average)	Combines strengths of both LSTM for non-linear data and ARIMA for linear data; improved forecast accuracy	The LSTM-ARIMA model may require further refinement to improve stability and reduce overfitting	Stock prices of BYD from June 30, 2011, to May 18, 2023 (2888 data points	MAE (Mean Absolute Error), MSE (Mean Squared Error), RMSE (Root Mean Squared Error)
5.	Time Series Data Mining: A Case Study With Big Data Analytics Approach(2020)	To explore time series prediction for financial risk forecasting using ARIMA, and assess its effectiveness in predicting financial risks	AR, MA, ARIMA (Auto-Regressive Integrated Moving Average), Unit Root Test, Differential Processing	Combines AR and MA models for better non-stationary time series predictions; Effective risk forecasting	Requires stable time series; Limited to financial data; performance depends on preprocessing of the data	Accuracy of financial risk prediction; Distribution Probability	National SME Stock Trading (New Third Board) historical data
6.	Predicting Stock Prices Using Data Mining Techniques(2013)	To help investors decide the best time to buy or sell stocks by analyzing historical stock data	Decision Tree, CRISP-DM (Cross-Industry Standard Process for Data Mining), ID3 and C4.5 algorithms	Decision tree does not require domain knowledge; can handle high-dimensional data; simple and	Low accuracy due to external factors affecting the stock market like political events, economic conditions, etc.	Historical stock prices of three companies listed in Amman Stock Exchange	Accuracy (evaluated using K-fold Cross Validation and Holdout methods)

		using decision trees		fast to implement		from April 2005 to May 2007	
7.	Stock Price Prediction Using Time Series Models(2019)	To compare the performance of time series models to predict stock prices of 5 banks listed on the NSE	ARIMA, PROPHET, KERAS with LSTM	LSTM can handle seasonality, ARIMA offers strong short-term predictions, PROPHET is robust to missing data	ARIMA has limitations with non-linear data, PROPHET struggles with very complex seasonality, LSTM requires extensive data preprocessing	Historical stock price data from National Stock Exchange (NSE), Yahoo Finance	RMSE (Root Mean Square Error),AIC (Akaike Information Criterion),, Train/Test Split Ratios,Error Propagation
8.	Forecasting on Stock Market Time Series Data Using Data Mining Techniques(2022)	To develop a model for forecasting stock market trends using ARIMA and provide insights for investment decisions based on technical analysis of historical stock data	ARIMA, Data Mining techniques, R programming, RStudio	ARIMA is effective for short-term forecasting, provides useful insights for investors to make timely buy/sell decisions	Limited performance in long-term forecasting due to assumption of mean reversion; tends to revert predictions to historical mean over time(43)	Stock data obtained via `getSymbols()` from Yahoo Finance	RMSE (Root Mean Square Error),ACF (Autocorrelation Function), PACF (Partial Autocorrelation Function
9.	Time Series Data Analysis for Stock Market Prediction using Data Mining Techniques with R(2015)	To predict stock market trends based on historical stock market data using time series data analysis and ARIMA	ARIMA (Auto-Regressive Integrated Moving Average)	Efficient for short-term stock market prediction.	ARIMA struggles with non-stationary data and is limited to linear relationships.	Data from Google Finance using R's getSymbols()	Accuracy, Forecast Precision, Visualizations

		model.					
10	Stock Price Prediction Using ARIMA Model(2014)	To provide investors with short-term stock price forecasts and improve their investment decision-making	ARIMA, R language for data visualization	Useful for short-term stock trend forecasting and providing clear investment advice.	Difficult to model non-linear data; may require hybrid models for better accuracy.	Data from NYSE and NSE	Time series plots, prediction accuracy
11	Stock Price Forecasting Using Information from Yahoo Finance and Google Trends(2012)	To predict weekly changes in stock prices by combining conventional time series analysis with data from Google Trends and Yahoo Finance.	ARIMA, Exponential Algorithm for News Impact Analysis	Provides correlation between stock prices and online trends, improves prediction accuracy compared to conventional time series methods	Low R-squared value, indicating limited explanatory power in predicting stock price changes	Yahoo finance,google trends	Coefficient estimates, R-squared value, regression plots
12							