

# Literature Survey

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The reason for selecting the dataset from 2021 to 2024 is due to the high volatility and significant fluctuations in Bitcoin prices during this period, compared to the relatively stable period from 2014 to 2020. Analyzing this four-year dataset provides better predictive insights into the recent trends and dynamics of Bitcoin prices. The methodologies for this analysis are grounded in statistical and econometric models, both linear and nonlinear. Key references include:

1. *Analysis of Financial Time Series* (Third Edition) by Ruey S. Tsay, which provides a comprehensive guide on various statistical methods for time series analysis, including AR, MA, ARMA, ARIMA, TAR, and GARCH models.
2. *John E. Freund's Mathematical Statistics with Applications* by Freund, John E., Miller, Irwin, and Miller, Marylees, offering foundational knowledge on statistical theories and applications.
3. *Nonlinear Time Series Analysis* (2019) by Ruey S. Tsay and Rong Chen, which focuses on nonlinear models and their applications in financial time series data.
4. *Time Series Analysis and Its Applications with R Examples* by Robert H. Shumway and David S. Stoffer, which provides practical examples of time series analysis using R programming.

S. No.	Title	Year	Author	Publication	Remarks
1	Analysis of Financial Time Series	2010	Ruey S. Tsay	Wiley	This book provides a comprehensive understanding of various statistical models, including AR, MA, ARMA, ARIMA, TAR, and GARCH, which are essential for analyzing Bitcoin price data.
2	John E. Freund's Mathematical Statistics with Applications	2014	Freund, John E., Miller, Irwin, Miller, Marylees	Pearson Education	This book offers foundational knowledge on statistical theories and applications, aiding in understanding the underlying statistical concepts used in the analysis.
3	Nonlinear Time Series Analysis	2019	Ruey S. Tsay, Rong Chen	Wiley	This book focuses on nonlinear models, which are crucial for understanding and applying TAR and GARCH models in the context of Bitcoin price analysis.
4	Time Series Analysis and Its Applications with R Examples	2020	Robert H. Shumway, David S. Stoffer	Springer	This book provides practical examples of time series analysis using R programming, which is essential for implementing the models and techniques in this case study.