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## A Study of Application of Time Series on Business Decision Making at Hexalpha Solutions, Nagpur

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**Abstract:** Time series analysis is a valuable tool for businesses seeking to make data-driven decisions. This project explores the various applications of time series analysis in business decision-making, witha focus on forecasting future trends and patterns. The report examines how one of the time series models such as (ARIMA, SARIMAX) can be used to predict sales, inventory levels, and demand, and how this information can be used to make informed decisions about production, marketing, and supply chain management. Additionally, the report discusses the limitations and challenges of time series analysis in the context of business decision-making, and provides recommendations for addressing these issues. Through this project, we aim to demonstrate the value of time series analysis as a critical tool for businesses seeking to make data-driven decisions.

Keywords: ARIMA, SARIMAX, Time Series, Supply Chain Management, Data Driven decision

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