

## ADVANCED TIME SERIES FORECASTING FOR COMMERCIAL VEHICLE SALES: A SARIMA MODEL APPROACH

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### **ABSTRACT**

*This study evaluates the effectiveness of the Seasonal Autoregressive Integrated Moving Average (SARIMA) model in forecasting monthly truck sales from January 2003 to December 2014. By incorporating seasonal components and external economic variables, the research identifies the best-fit SARIMA model for commercial vehicle sales forecasting. The findings highlight the practical applications of SARIMA in business decision-making, offering a systematic approach to navigating the complexities of supply and demand in the automotive industry.*

**KEYWORDS:** *Time Series Analysis, SARIMA model, Truck Sales Forecasting, Seasonal Patterns, Business Decision-Making, Inventory Management, Financial Planning, Marketing Strategies*