

# SALES FORECASTING USING ARIMA AS A STRATEGY TO IMPROVE SERVICE QUALITY

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## Abstract

Intense competition among culinary businesses has been a contributing factor to declining sales revenue. Since August 2024, Warunk Iciiik Iwiiir restaurant in Yogyakarta has experienced a significant decrease in turnover. Various factors may have influenced this trend. To support strategic decision-making, this study applies time series forecasting to predict future sales and assist the restaurant in devising plans to improve revenue. The ARIMA (AutoRegressive Integrated Moving Average) model was employed for forecasting, specifically the ARIMA (1,1,1) configuration, which yielded a mean absolute percentage error (MAPE) of 17.6%, indicating reasonable accuracy. Additionally, sentiment analysis of customer reviews was conducted to evaluate service quality. The forecast for March 2025 showed an estimated turnover of IDR 64,636,815, closely aligning with the actual figure of IDR 61,752,110. This result demonstrates that the ARIMA model performs effectively in forecasting the restaurant's turnover. The findings are expected to guide the restaurant in identifying and improving underperforming service aspects to enhance customer satisfaction and increase future sales.

**Keywords:** Forecasting, ARIMA, Warunk Iciiik Iwiiir.