Abstract

This research explores the use of predictive analytics in sales forecasting, focusing on how data-driven models can improve forecasting accuracy and provide valuable strategic insights for businesses. Sales forecasting is critical for inventory management, financial planning, and overall business strategy. With the growing availability of data, predictive analytics offers an opportunity to enhance traditional forecasting methods by incorporating variables like customer behavior, market trends, and economic factors. This study investigates how predictive analytics can refine sales predictions and support more informed decision-making.

A mixed-methods approach is employed to offer a comprehensive evaluation of predictive analytics in sales forecasting. The quantitative phase involves analyzing historical sales data, market trends, and external factors using predictive models like regression analysis and machine learning algorithms. The study assesses the accuracy of these models compared to traditional forecasting methods and measures their impact on sales planning. The qualitative phase includes interviews with sales managers, data analysts, and business strategists to understand how predictive analytics is integrated into sales forecasting practices, the challenges involved, and how the insights gained influence strategic decision-making.

The findings from this study reveal the potential of predictive analytics to significantly improve sales forecasting accuracy and provide deeper insights into future market conditions. By combining quantitative data with expert perspectives, the research offers actionable recommendations for businesses looking to leverage predictive analytics to enhance sales strategy, optimize resources, and increase profitability.