



Impact of Media Spending on Sales Performance

AN ANALYTICAL REPORT ON THE EFFECTIVENESS OF TV, RADIO, AND SOCIAL MEDIA ADVERTISEMENTS

06.05.2024

INTRODUCTION

This report delves into the relationship between media spending and sales outcomes for a company, providing insight into the efficacy of various advertising channels. By utilizing linear regression analysis on cleaned datasets, we aim to elucidate how investments in TV, Radio, and Social Media correlate with sales performance. Highlighting the most influential media channels, this analysis serves as a strategic tool for optimizing marketing budgets and enhancing sales results.

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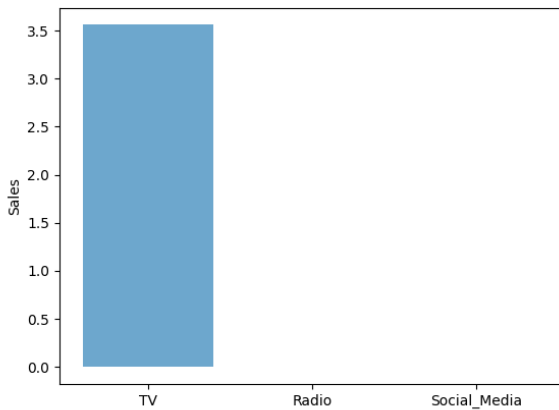
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OVERVIEW OF ATTRIBUTES AND THEIR IMPACT ON SALES

Impact of Different Media on Sales

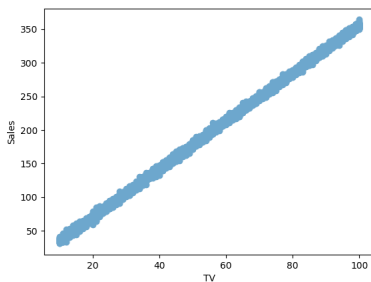


TV: 3.560 (Major positive impact on sales, suggesting high ROI on TV ad spend)

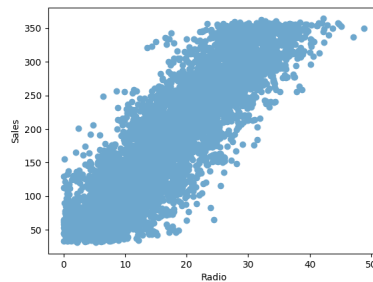
Radio: 0.001 (Negligible negative impact, indicating low or ineffective return on Radio ad spend)

Social Media: 0.003 (Minimal positive impact, shows slight effectiveness in influencing sales)

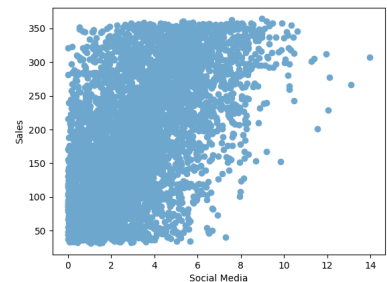
Visual Insights



First image shows a strong linear relationship between TV advertisement spending and sales, indicating a direct and significant impact on sales.



Second image displays a scattered plot with no clear pattern between Radio advertisement spending and sales, suggesting it has an inconsistent and weak relationship with sales.



Third image shows a dense clustering of data with no clear trend between Social Media spending and sales, indicating a minimal overall impact on sales.

Model Performance Indicators

- **R2 (Coefficient of Determination): 0.999** (Indicates the model explains 99.9% of variability in sales from advertising spends)
- **MAE (Mean Absolute Error): 2.381** (Average absolute error between predicted and actual sales)
- **MSE (Mean Squared Error): 8.648** (Indicates the average square of the errors)
- **RMSE (Root Mean Squared Error): 2.941** (Measures the average magnitude of the error)

AI WARNING

This document contains content that has been generated by an artificial intelligence model. While the information presented is based on data-driven analysis, it is important to exercise caution and critical thinking when interpreting the results. Human oversight and expert judgment are essential to ensure the accuracy and relevance of the insights provided.