

MLR Report

Regression Results

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.939	0.312	9.422	0.00
TV	0.046	0.001	32.809	0.00
radio	0.189	0.009	21.893	0.00
newspaper	-0.001	0.006	-0.177	0.86

Figure 1: Coefficients

Correlation Matrix

	TV	radio	newspaper	sales
TV	1.000	0.055	0.057	0.782
radio	0.055	1.000	0.354	0.576
newspaper	0.057	0.354	1.000	0.228
sales	0.782	0.576	0.228	1.000

Figure 2: Correlation matrix

Interpretation

- **Regression Analysis:** The regression results indicate that TV and radio advertising expenditures are significant predictors of sales (p-value < 0.05). However, newspaper advertising expenditures are not significant (p-value = 0.860).
- **TV:** A unit increase in TV advertising expenditure is associated with an average increase of 0.046 in sales.
- **Radio:** A unit increase in radio advertising expenditure is associated with an average increase of 0.189 in sales.
- **Newspaper:** The impact of newspaper advertising is negligible and not statistically significant.

- **Correlation Analysis:** Sales have the highest correlation with TV advertising (0.782), followed by radio advertising (0.576). The correlation between sales and newspaper advertising is weak (0.228).

Conclusion

The analysis suggests that TV and radio are effective channels for increasing sales, while newspaper advertising does not have a significant impact.