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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pearson Correlation** | | | | **Descriptive Statistics** | | | **Model Summary** | | | **Unstandardized Coefficients** |  | **Skewness** | | **Kurtosis** | |
|  | Sales\_Performance | Advertising\_Budget | Social\_Media\_Spend | Mean | Std. Deviation | N | Adjusted R Square |  | Durbin-Watson | B | VIF | Statistic | Std. Error | Statistic | Std. Error |
| Sales\_Performance | 1.000 | -.005 | -.230 | 103.10 | 32.290 | 20 |  | R Square Change |  | 118.730 |  | -.229 | .512 | -1.430 | .992 |
| Advertising\_Budget | -.005 | 1.000 | .089 | 27.90 | 10.925 | 20 | -.058 | .053 | 1.820 | .045 | 1.008 | .148 | .512 | -.742 | .992 |
| Social\_Media\_Spend | -.230 | .089 | 1.000 | 15.25 | 6.742 | 20 |  | | | -1.108 | 1.008 | .107 | .512 | -1.439 | .992 |

**MARKETING REGRESSION DATASET**

**RIYA RANA**

**ASSIGNMENT – (SPSS)**

**DESCRIPTION:**

**1. Pearson Correlation:** Sales Performance & Advertising Budget: -0.005 (Very weak negative correlation)

* Sales Performance & social media Spend: -0.230 (Weak negative correlation)
* Advertising Budget & social media Spend: 0.089 (Weak positive correlation)

Insight: Neither Advertising Budget nor social media Spend strongly correlates with Sales Performance

**2. Descriptive Statistics:** Sales Performance: Mean = 103.10, Std. Deviation = 32.29

* Advertising Budget: Mean = 27.90, Std. Deviation = 10.93
* Social media Spend: Mean = 15.25, Std. Deviation = 6.74

Insight: The variability is highest in Sales Performance, showing a wider range of outcomes.

**3. Model Summary:** Adjusted R²: -0.058 (Poor model fit)

* R² Change: 0.053 (Minimal explanatory power)
* Durbin-Watson: 1.820 (No significant autocorrelation)

Insight: The model does not explain much of the variation in Sales Performance.

**4. Unstandardized Coefficients:** Constant (Intercept): 118.73

* Advertising Budget: 0.045 (Small positive effect)
* Social media Spend: -1.108 (Negative effect)

**5. Collinearity (VIF):** Advertising Budget: 1.008

* Social Media Spend: 1.008

Insight: No multicollinearity concerns (VIF < 5 indicates acceptable levels).

**6. Skewness & Kurtosis:**

* Sales Performance: Slight left skew (-0.229), platykurtic (-1.430).
* Advertising Budget: Mild right skew (0.148), slightly flat (-0.742).
* Social media Spend: Slight right skew (0.107), flat (-1.439).

Insight: Data is approximately normal but slightly flatter than a standard normal distribution.