

Regression
Analysis

Simple linear regression analysis is utilized to measure relationships between two variables, enabling predictive power with data

Correlation
Coefficient

Scatter Plot

Used to measure linear relationship within data

Correlation
Coefficient

A numerical measurement show the strength of relationships between two variables

Closer to 1.0 or -1.0 = Stronger

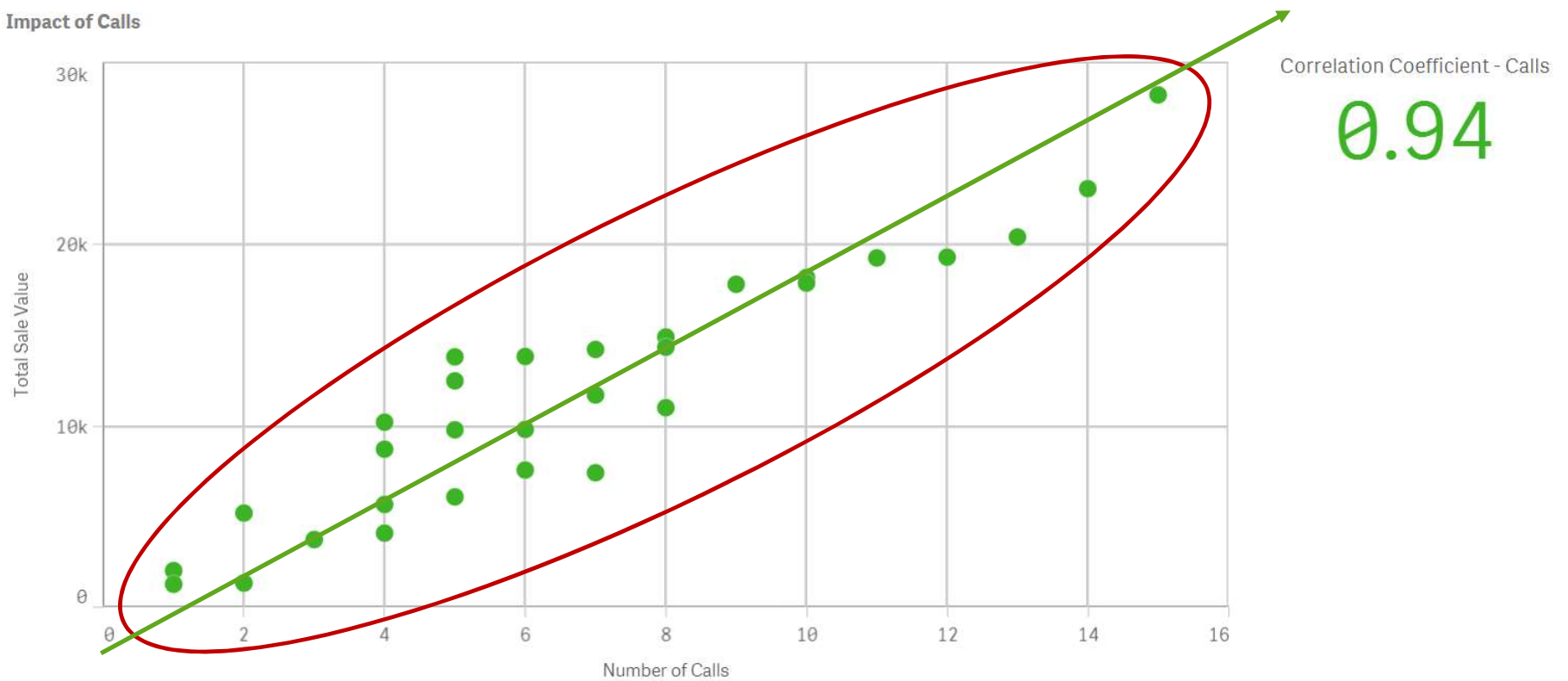
Closer to 0 = Weaker

Scatter Plot

A data visualization commonly used to show linear relationships

Calls

Impact of Calls



Formula

The following formula is utilized to power simple linear regression analysis

$$y = mx + b + se$$

Dependent variable:
dependent on the x
variable

Slope: shows the
incremental change
in y for each unit
change in x

Independent
variable: the
explanatory variable,
explaining the y
variable

Y-intercept: where
the regression line
crosses the y axis

Standard error: the
average imprecision
within the regression
line, helping the
predictive model

Watch-outs

To ensure simple linear regression analysis is appropriate, these watch-outs need to be accounted for

- 1. Ensure a linear relationship exists between the two variables you are looking the analyze*
- 2. Ensure the independent/explanatory variables and/or the residuals are independent from the other independent/explanatory variables and/or residuals*
- 3. Analyze the residuals themselves to determine if they make a normal distribution when charted*