

Key Findings Car Sales Regression Analysis in Python.

R-squared: The R-squared value indicates the proportion of variance in the dependent variable ('Selling Price') that is explained by the independent variable(s) ('Condition'). A higher R-squared value indicates a better fit of the model to the data.

1. **Coefficients:** The coefficient for the 'Condition' variable represents the estimated change in the dependent variable ('Selling Price') for a one-unit increase in the independent variable ('Condition').
2. **P-value:** The p-value associated with the coefficient indicates the statistical significance of the relationship between the independent variable ('Condition') and the dependent variable ('Selling Price'). A low p-value (typically less than 0.05) suggests that the relationship is statistically significant.
3. **Intercept:** The intercept term represents the estimated value of the dependent variable ('Selling Price') when all independent variables are equal to zero.

Regression Analysis between Salling price and Condition

- R-square (0.129) is greater than F-statistic (0.000825) thus the overall model is statistically significant.
- The coefficient for 'Condition' is 303.79, indicating that for every one-unit increase in the Condition scale, the selling price can be Increased by \$303.79.
- The p-value associated with 'Condition' (0.000) is less than 0.05, indicating that the relationship between Condition scale and selling price is statistically significant.
- The intercept term (constant) is 6284.16, representing the estimated selling price when the Condition scale is zero.

Regression Analysis between Salling price and Odometer

- R-square (0.339) is greater than F-statistic (0.0000287) thus the overall model is statistically significant.
- The coefficient for 'Odometer' is -0.106, indicating that for every one-unit increase in the odometer reading, the selling price decreases by a factor of \$0.106 (assuming the unit of odometer is consistent with the unit of selling price).
- The p-value associated with 'Odometer' (0.000) is less than 0.05, indicating that the relationship between odometer reading and selling price is statistically significant.
- The intercept term (constant) is 0.000209, representing the estimated factor of selling price when the odometer reading is zero.