

Report for Linear Model Predicted_Price

Basic Summary

Call:

lm(formula = price ~ carat + cut + color + clarity, data = the.data)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|--------|------|--------|-----|-------|
| -16804 | -681 | -195 | 467 | 10393 |

Coefficients:

| | Estimate | Std. Error | t value | Pr(> t) |
|--------------|----------|------------|---------|---------------|
| (Intercept) | -7382.3 | 53.57 | -137.80 | < 2.2e-16 *** |
| carat | 8887.4 | 12.48 | 712.40 | < 2.2e-16 *** |
| cutGood | 682.2 | 34.88 | 19.56 | < 2.2e-16 *** |
| cutIdeal | 1017.1 | 31.79 | 32.00 | < 2.2e-16 *** |
| cutPremium | 889.3 | 32.07 | 27.73 | < 2.2e-16 *** |
| cutVery Good | 867.1 | 32.44 | 26.73 | < 2.2e-16 *** |
| colorE | -205.2 | 19.04 | -10.78 | < 2.2e-16 *** |
| colorF | -298.7 | 19.23 | -15.53 | < 2.2e-16 *** |
| colorG | -498.6 | 18.83 | -26.47 | < 2.2e-16 *** |
| colorH | -966.2 | 20.02 | -48.26 | < 2.2e-16 *** |
| colorI | -1441.4 | 22.44 | -64.25 | < 2.2e-16 *** |
| colorJ | -2321.4 | 27.75 | -83.67 | < 2.2e-16 *** |
| clarityIF | 5421.8 | 54.18 | 100.08 | < 2.2e-16 *** |
| claritySI1 | 3570.6 | 46.37 | 77.00 | < 2.2e-16 *** |
| claritySI2 | 2616.9 | 46.56 | 56.20 | < 2.2e-16 *** |
| clarityVS1 | 4534.7 | 47.34 | 95.80 | < 2.2e-16 *** |
| clarityVS2 | 4217.1 | 46.62 | 90.46 | < 2.2e-16 *** |
| clarityVVS1 | 5057.8 | 50.12 | 100.91 | < 2.2e-16 *** |
| clarityVVS2 | 4953.7 | 48.74 | 101.63 | < 2.2e-16 *** |

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1156.6 on 49981 degrees of freedom

Multiple R-squared: 0.9163, Adjusted R-Squared: 0.9162

F-statistic: 30379 on 18 and 49981 degrees of freedom (DF), p-value < 2.2e-16

Type II ANOVA Analysis

Response: price

| | Sum Sq | DF | F value | Pr(>F) |
|-----------|-----------------|-------|-----------|---------------|
| carat | 678893490589.05 | 1 | 507516.62 | < 2.2e-16 *** |
| cut | 1611663698.77 | 4 | 301.21 | < 2.2e-16 *** |
| color | 15151704385.76 | 6 | 1887.81 | < 2.2e-16 *** |
| clarity | 35677772957.82 | 7 | 3810.2 | < 2.2e-16 *** |
| Residuals | 66858452084.92 | 49981 | | |

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1