

```
> summary(housing.data)
```

| BROKERTITLE                 | TYPE             | PRICE             | BEDS               |
|-----------------------------|------------------|-------------------|--------------------|
| BATH                        |                  |                   |                    |
| Length:4801                 | Length:4801      | Min. :2.494e+03   | Min. : 1.000       |
| Min. : 0.000                |                  |                   |                    |
| Class :character            | Class :character | 1st Qu.:4.990e+05 | 1st Qu.: 2.000 1st |
| Qu.: 1.000                  |                  |                   |                    |
| Mode :character             | Mode :character  | Median :8.250e+05 | Median : 3.000     |
| Median : 2.000              |                  |                   |                    |
|                             |                  | Mean :2.357e+06   | Mean : 3.357       |
| Mean : 2.374                |                  |                   |                    |
|                             |                  | 3rd Qu.:1.495e+06 | 3rd Qu.: 4.000 3rd |
| Qu.: 3.000                  |                  |                   |                    |
|                             |                  | Max. :2.147e+09   | Max. :50.000       |
| Max. :50.000                |                  |                   |                    |
| PROPERTYSQFT                | ADDRESS          | STATE             | MAIN_ADDRESS       |
| Min. : 230                  | Length:4801      | Length:4801       | Length:4801        |
| 1st Qu.: 1200               | Class :character | Class :character  | Class :character   |
| Median : 2184               | Mode :character  | Mode :character   | Mode :character    |
| Mean : 2184                 |                  |                   |                    |
| 3rd Qu.: 2184               |                  |                   |                    |
| Max. :65535                 |                  |                   |                    |
| ADMINISTRATIVE_AREA_LEVEL_2 | LOCALITY         | SUBLOCALITY       | STREET_NAME        |
| Length:4801                 | Length:4801      | Length:4801       | Length:4801        |
| Class :character            | Class :character | Class :character  | Class              |
| :character                  |                  |                   |                    |
| Mode :character             | Mode :character  | Mode :character   | Mode               |
| :character                  |                  |                   |                    |

| LONG_NAME        | FORMATTED_ADDRESS | LATITUDE      | LONGITUDE       |
|------------------|-------------------|---------------|-----------------|
| Length:4801      | Length:4801       | Min. :40.50   | Min. : -74.25   |
| Class :character | Class :character  | 1st Qu.:40.64 | 1st Qu.: -73.99 |
| Mode :character  | Mode :character   | Median :40.73 | Median : -73.95 |
|                  |                   | Mean :40.71   | Mean : -73.94   |
|                  |                   | 3rd Qu.:40.77 | 3rd Qu.: -73.87 |
|                  |                   | Max. :40.91   | Max. : -73.70   |

```
> summary(model1)
```

Call:

```
lm(formula = PRICE ~ PROPERTYSQFT, data = housing.data)
```

Residuals:

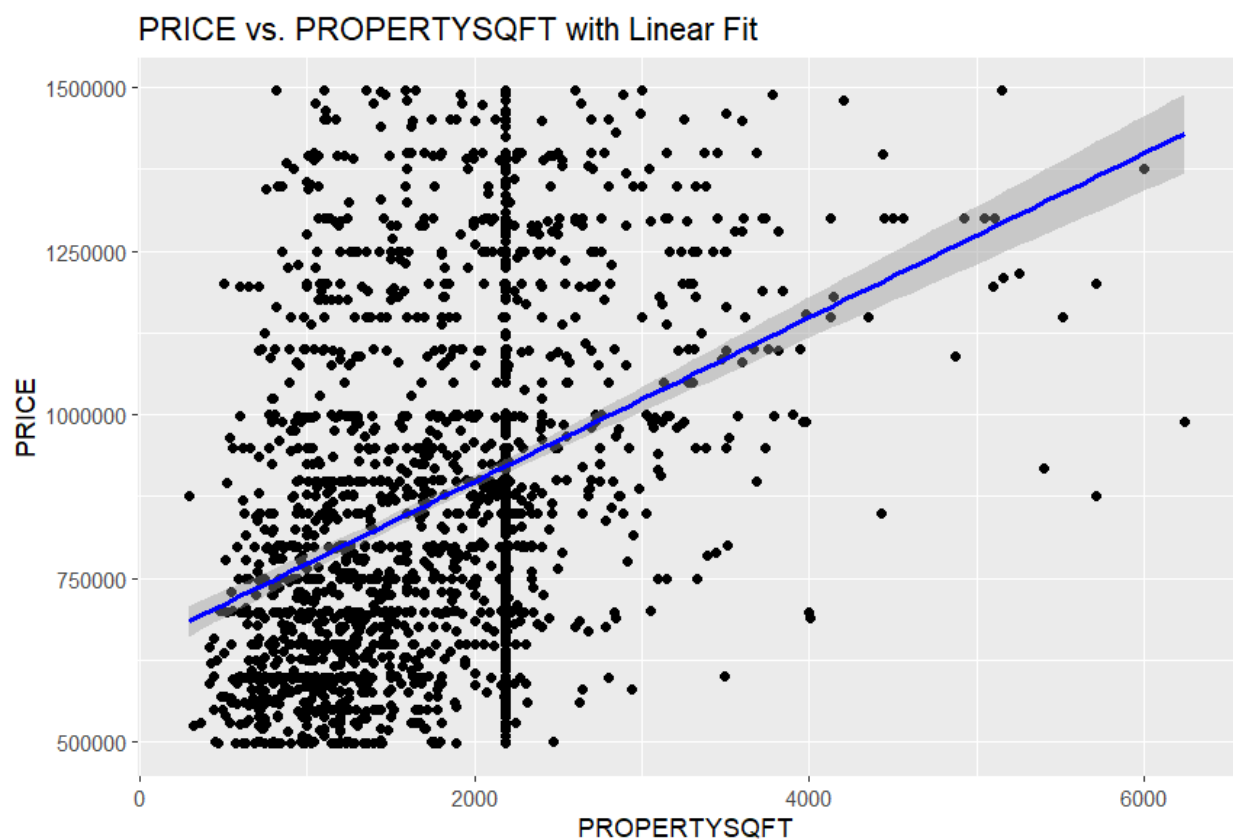
| Min     | 1Q      | Median | 3Q     | Max    |
|---------|---------|--------|--------|--------|
| -488204 | -184799 | -48453 | 166120 | 745792 |

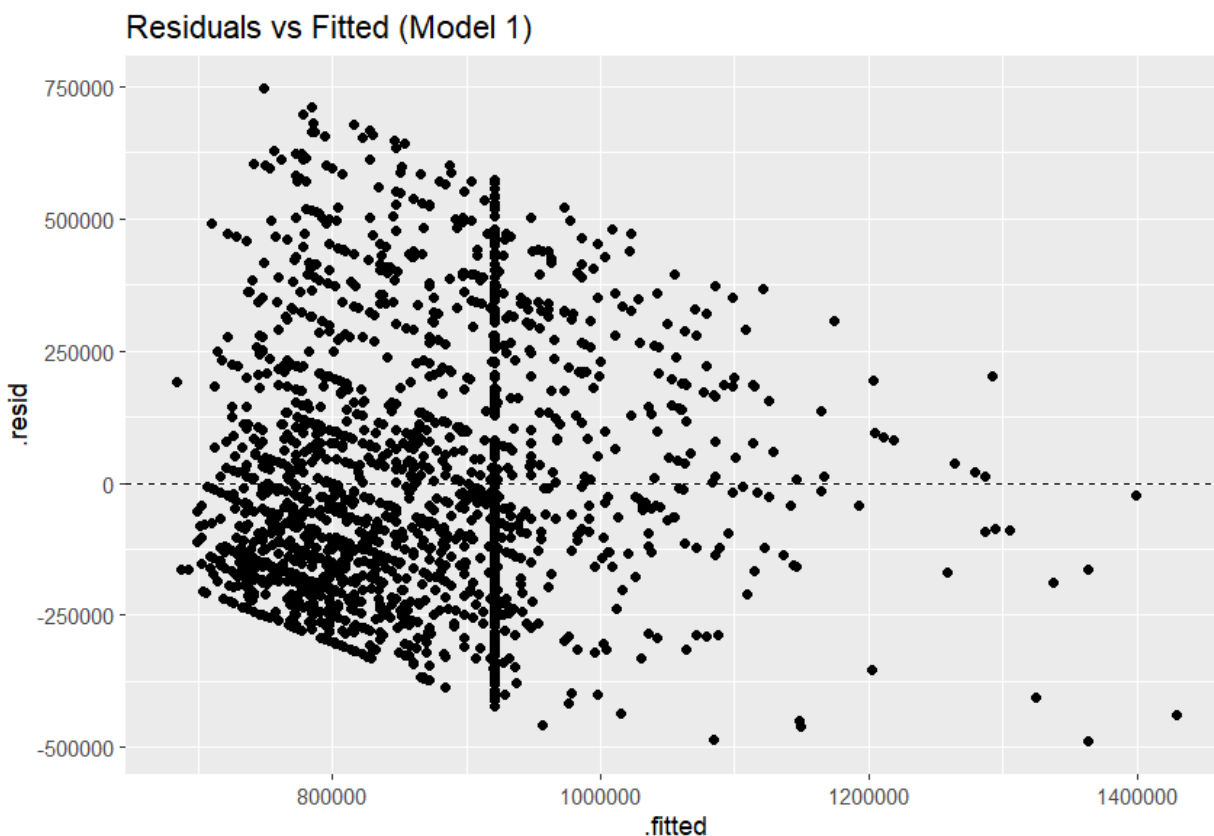
Coefficients:

|              | Estimate  | Std. Error | t value | Pr(> t )   |
|--------------|-----------|------------|---------|------------|
| (Intercept)  | 6.472e+05 | 1.367e+04  | 47.34   | <2e-16 *** |
| PROPERTYSQFT | 1.254e+02 | 6.909e+00  | 18.14   | <2e-16 *** |

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 248700 on 2413 degrees of freedom  
Multiple R-squared: 0.12, Adjusted R-squared: 0.1197  
F-statistic: 329.2 on 1 and 2413 DF, p-value: < 2.2e-16





```
> summary(model2)
```

Call:

```
lm(formula = PRICE ~ PROPERTYSQFT + BEDS, data = housing.data)
```

Residuals:

|  | Min     | 1Q      | Median | 3Q     | Max    |
|--|---------|---------|--------|--------|--------|
|  | -493279 | -182697 | -54960 | 155569 | 770366 |

Coefficients:

|              | Estimate  | Std. Error | t value | Pr(> t )   |
|--------------|-----------|------------|---------|------------|
| (Intercept)  | 6.271e+05 | 1.364e+04  | 45.976  | <2e-16 *** |
| PROPERTYSQFT | 8.540e+01 | 8.135e+00  | 10.499  | <2e-16 *** |
| BEDS         | 2.802e+04 | 3.133e+03  | 8.944   | <2e-16 *** |

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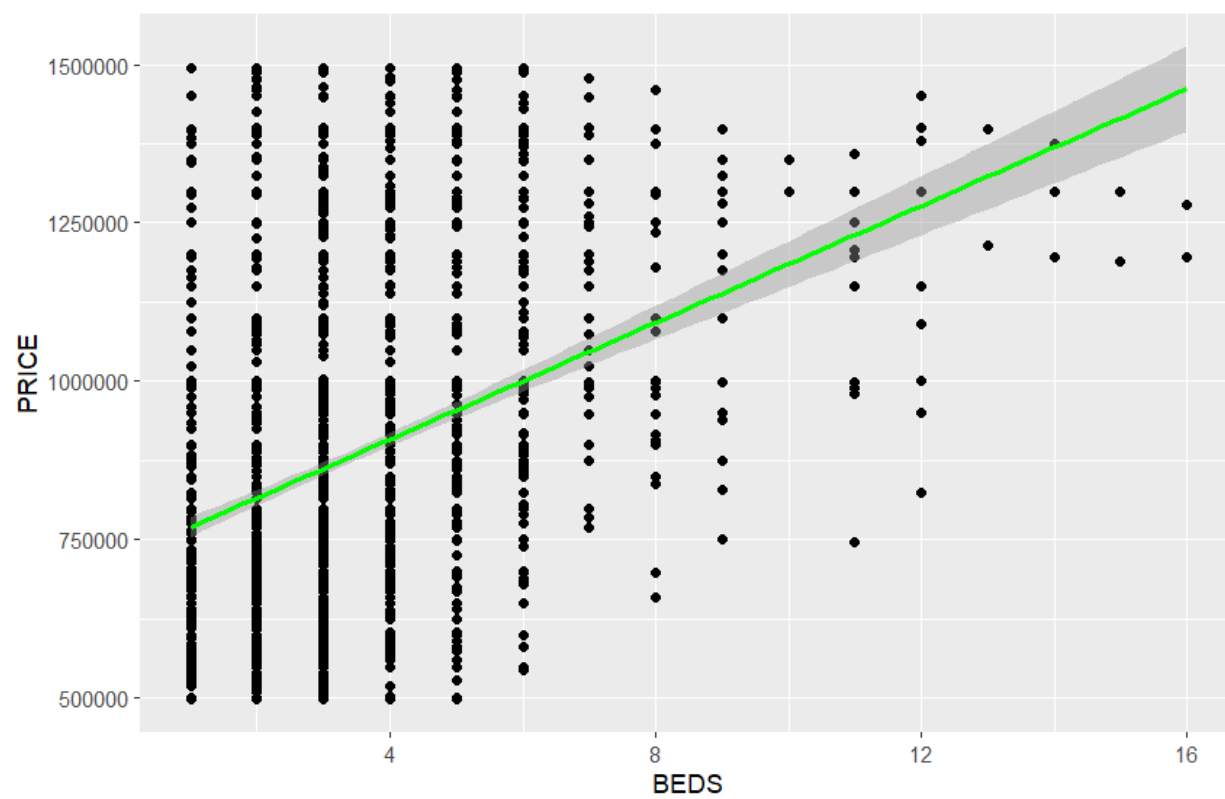
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

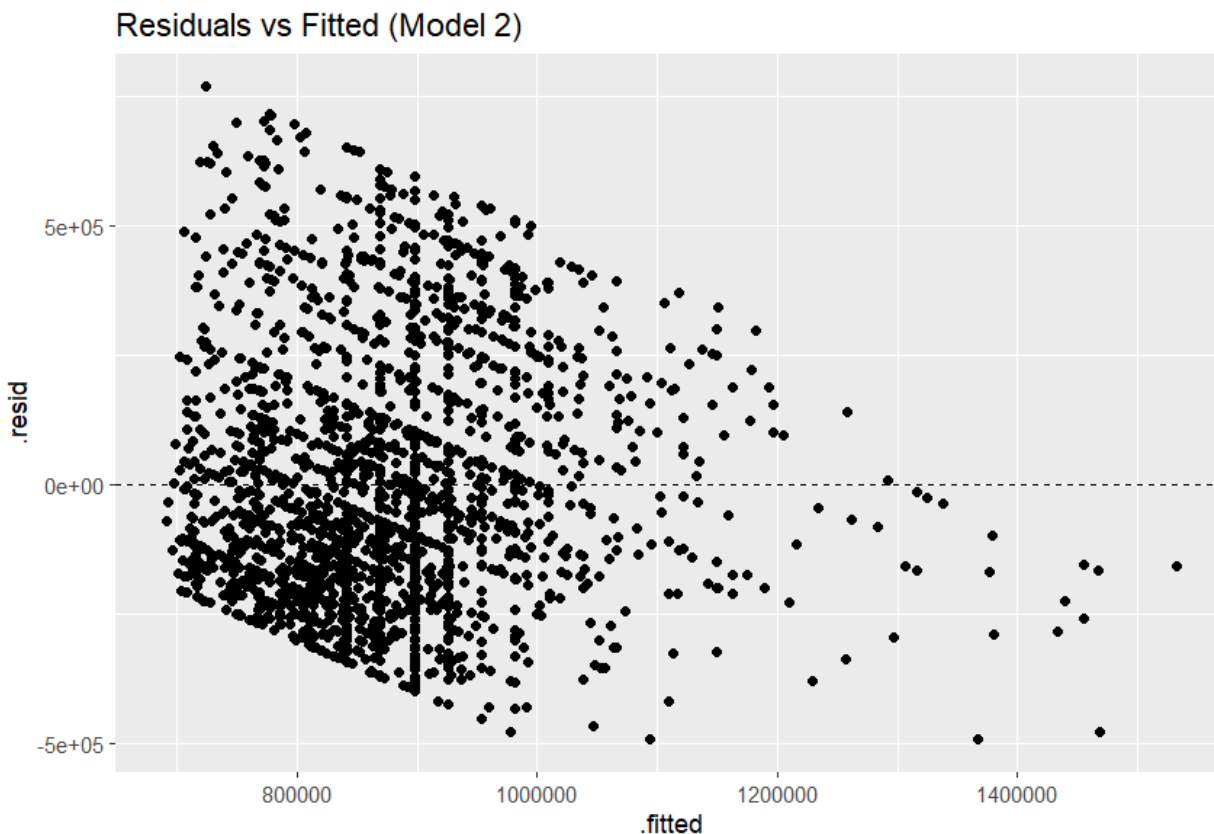
Residual standard error: 244700 on 2412 degrees of freedom

Multiple R-squared: 0.1483, Adjusted R-squared: 0.1476

F-statistic: 210 on 2 and 2412 DF, p-value: < 2.2e-16

PRICE vs. BEDS with Linear Fit





```
> summary(model3)
```

Call:

```
lm(formula = PRICE ~ PROPERTYSQFT + BEDS + BATH, data = housing.data)
```

Residuals:

|  | Min     | 1Q      | Median | 3Q     | Max    |
|--|---------|---------|--------|--------|--------|
|  | -668919 | -183467 | -54426 | 151801 | 777403 |

Coefficients:

|              | Estimate  | Std. Error | t value | Pr(> t ) |     |
|--------------|-----------|------------|---------|----------|-----|
| (Intercept)  | 592551.41 | 13816.13   | 42.888  | < 2e-16  | *** |
| PROPERTYSQFT | 64.82     | 8.24       | 7.867   | 5.44e-15 | *** |
| BEDS         | 5676.12   | 3806.80    | 1.491   | 0.136    |     |
| BATH         | 66605.26  | 6704.40    | 9.935   | < 2e-16  | *** |

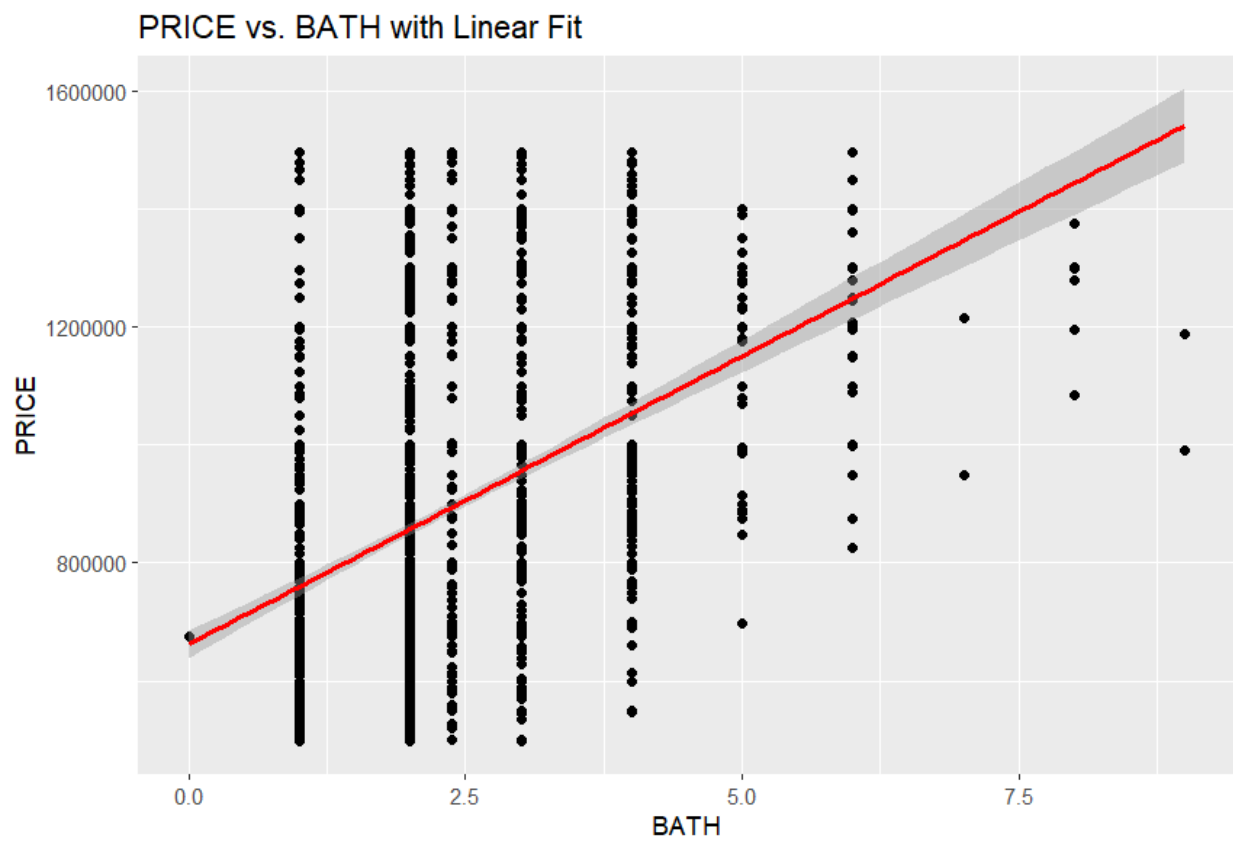
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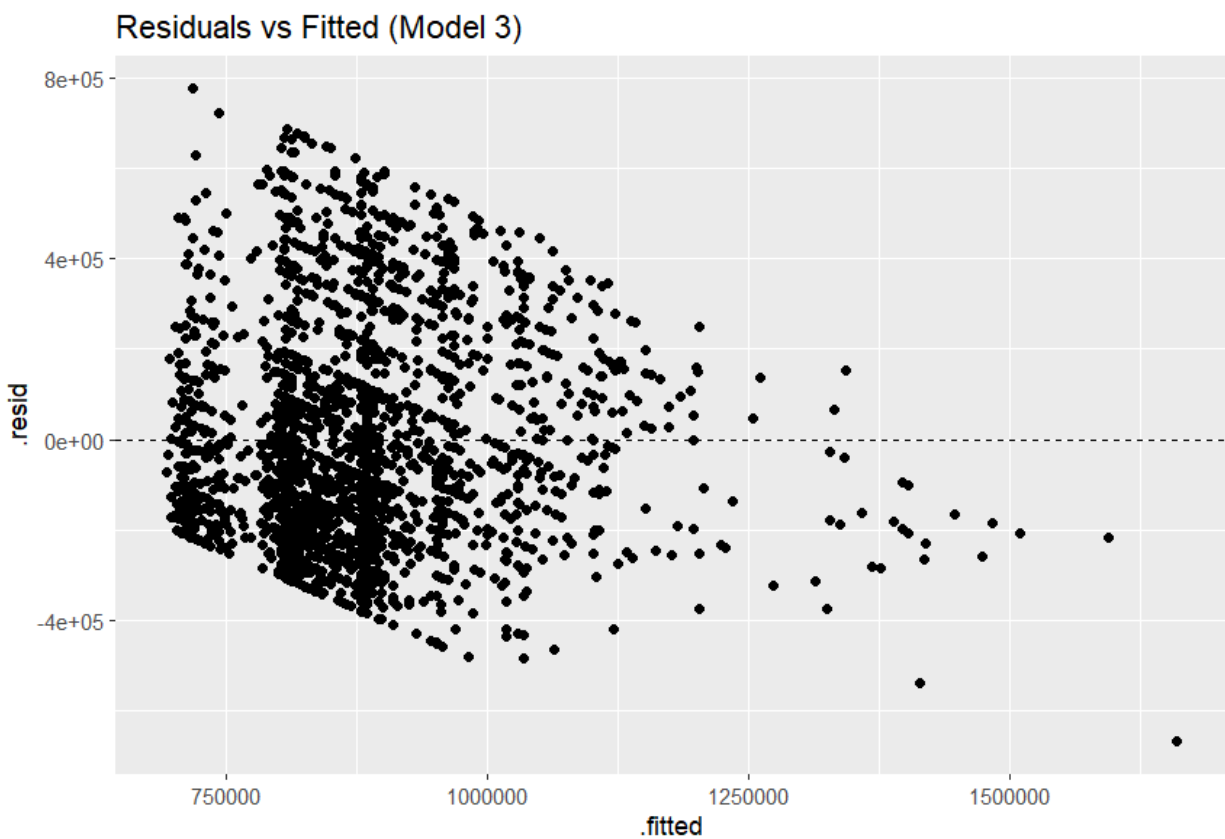
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 239900 on 2411 degrees of freedom

Multiple R-squared: 0.1818, Adjusted R-squared: 0.1808

F-statistic: 178.6 on 3 and 2411 DF, p-value: < 2.2e-16





```
> AIC(model1, model2, model3)
```

|        | df | AIC      |
|--------|----|----------|
| model1 | 3  | 66865.36 |
| model2 | 4  | 66788.57 |
| model3 | 5  | 66693.68 |

```
> BIC(model1, model2, model3)
```

|        | df | BIC      |
|--------|----|----------|
| model1 | 3  | 66882.73 |
| model2 | 4  | 66811.73 |
| model3 | 5  | 66722.63 |