* 8. Out of the two models, I believe that the Polynomial Regression with Regularization is the superior model. My primary reason for this is the R^2 values and RMSE of the two models.
* For the R^2 values the higher the values the greater proportion of the variance a model would have, the model with the greatest R^2 training value is the PRR model with a value of 0.1845 when compared to the polynomial regression’s value of 0.0367.
* RMSE value measures the average magnitude of the error between the actual values and the predicted values with lower values being preferred for a better fit, the model with the lowest RMSE training value would be the PRR model with 69,742.9705 when compared to the polynomial regression model with a value of 75,799.5545.

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| --- | --- | --- |
| Regressions | R^2 Training Values | R^2 Testing Values |
| Linear Regression | 0.0709 | 0.0956 |
| Polynomial Regression | 0.0367 | 0.0151 |
| Polynomial Regression with Regularization | 0.1845 | 0.0151 |

|  |  |  |
| --- | --- | --- |
| Regressions | RMSE Training Values | RMSE Testing Values |
| Linear Regression | 74443.7816 | 83289.6666 |
| Polynomial Regression | 75799.5545 | 86915.0853 |
| Polynomial Regression with Regularization | 69742.9705 | 86915.0853 |