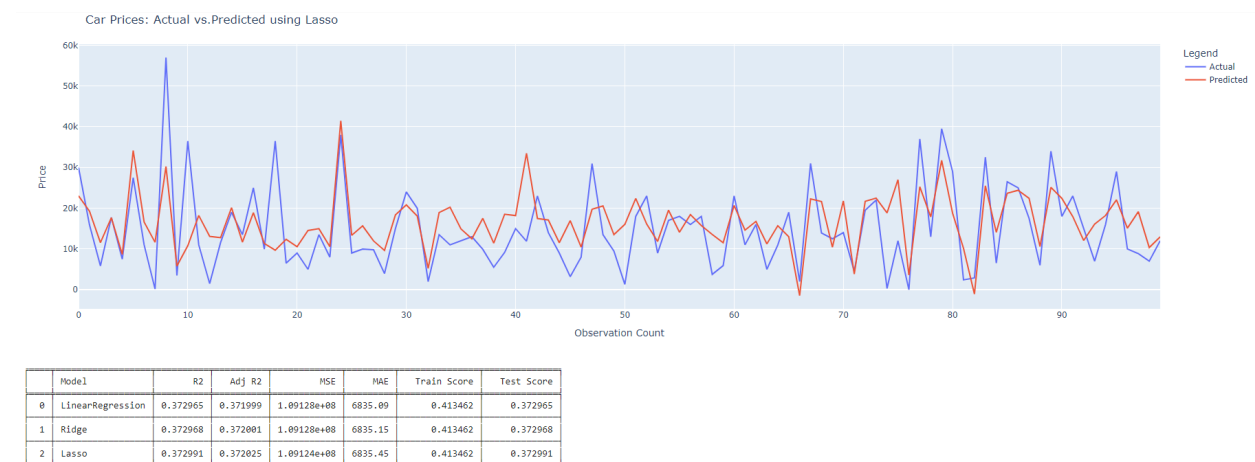**Module 11 Price Prediction Read Me**

Overview

In this application, we will explore a dataset that contains information on 426K cars. Our goal is to understand what factors make a car more or less expensive. As a result of this analysis, we will provide clear recommendations to your clients the used car dealership as to what consumers value in a used car.

Assumptions and Considerations

The models trained and tested (Linear Regression, Ridge and Lasso Regressions) produced low predictive accuracy and they shall not be used in this state. Other models and an ensemble of models shall be considered to achieve an accuracy rate of at least 90% before the models can be used by the client.

Recommendations to our clients

- Car prices are impacted by car age. New Cars and Old cars in great condition command the highest prices. Add to your inventory New and Vintage Cars in great condition (new, like new, excellent).
- Car prices are impacted by their horsepower. Cars with a number of cylinders greater than 6 in new, like new, and excellent condition command high prices. Add to your inventory more cars with higher horsepower.
- Cars running on Diesel and Electricity command higher prices.
- Cars with 8 cylinders and greater with title status as rebuild command a high price. These cars may fall in the vintage category.
- Florida, California, New York and Texas have the highest car inventory.
- Ferrari, Aston Martin, Tesla and Porsche are the priciest cars in the inventory.
- White, black, orange, red and custom are the most expensive car colors.

Car Prices: Actual vs.Predicted using Lasso

	Model	R2	Adj R2	MSE	MAE	Train Score	Test Score
0	LinearRegression	0.372965	0.371999	1.09128e+08	6835.09	0.413462	0.372965
1	Ridge	0.372968	0.372001	1.09128e+08	6835.15	0.413462	0.372968
2	Lasso	0.372991	0.372025	1.09124e+08	6835.45	0.413462	0.372991

See Notebook for more details