



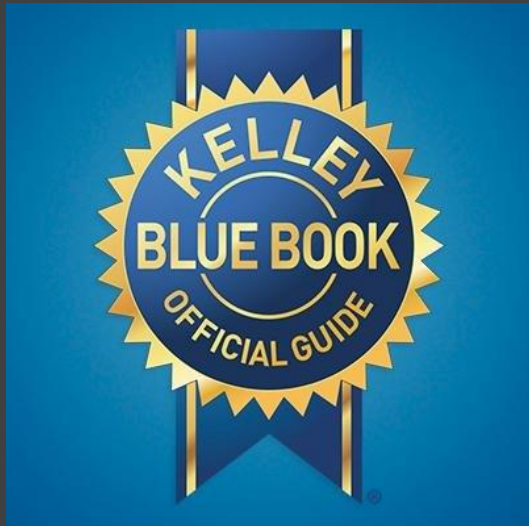
Xiangwei Zhong
NYC Data Science Academy
Do These Cars Have
the Best Resale
Values?

| Why Do We
Care?

We love cars.

We care about
money.

2019 Best Resale Value Awards: Top Five Cars



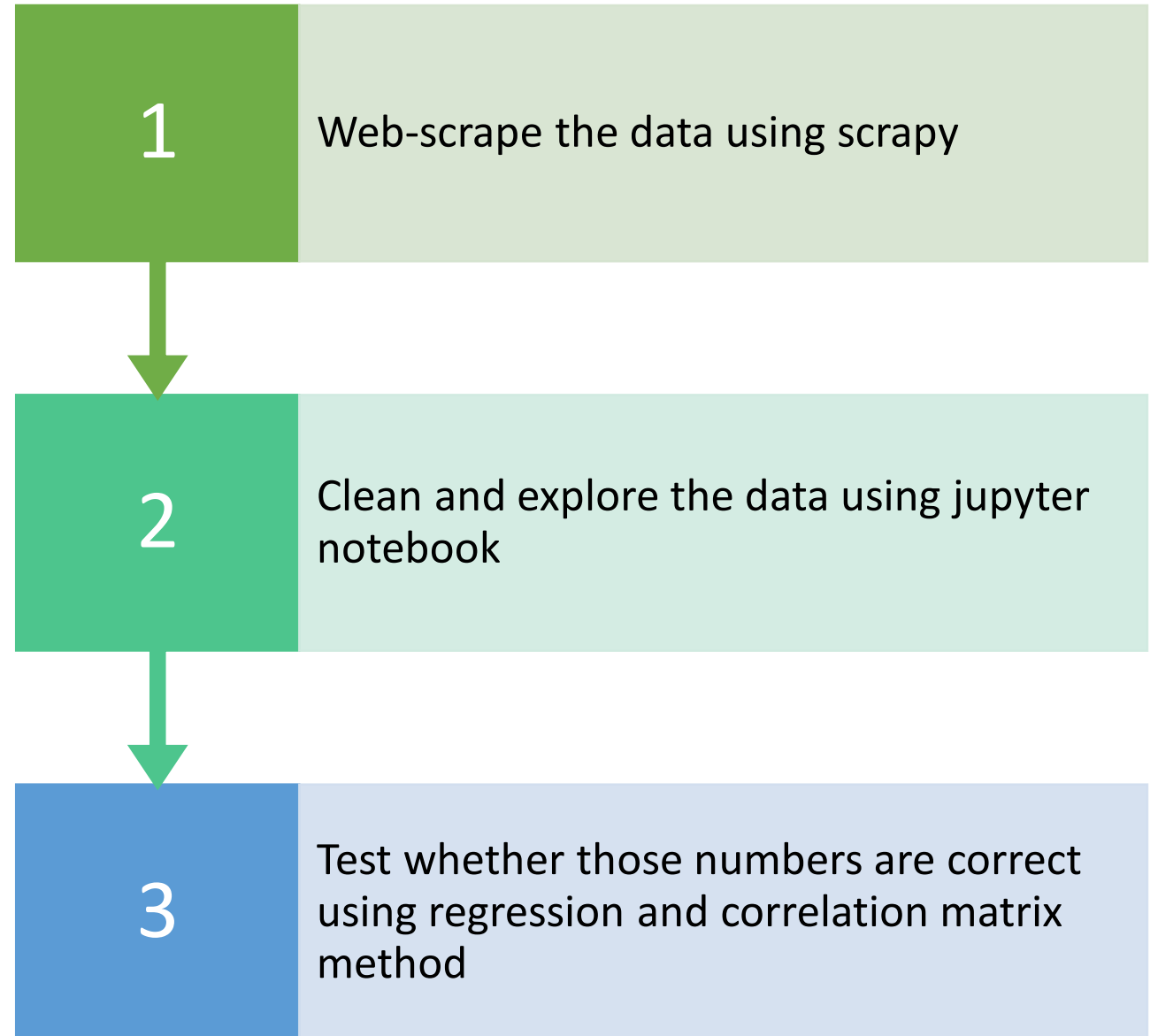
- Toyota Tacoma
 - at 36 months: 69.4%
 - at 60 months: 62.2%
 - Jeep Wrangler
 - at 36 months: 66.5%
 - at 60 months: 58.3%
 - Toyota Tundra
 - at 36 months: 66.6%
 - at 60 months: 56.9%
-
- GMC Sierra
 - at 36 months: 62.2%
 - at 60 months: 56.7%
 - Toyota 4Runner
 - at 36 months: 65.7%
 - at 60 months: 56.3%
 - Source:
<https://www.kbb.com/new-cars/best-resale-value-awards/best-resale-top-10-cars/>

Questions

How do they get those numbers?

Are those numbers correct?

Flowchart



[Cars for Sale](#)[Sell Your Car](#)[Service & Repair](#)[Research](#)[Videos & Reviews](#)[Sign Up](#)

Used Jeep Wrangler for Sale

[Filter Results](#)[New Search](#)

Location

Search within

All miles

10001

☒ Show cars available for home delivery

New/Used

☐ All ☐ New ☒ Used☐ Certified Pre-Owned

Year

Min

1987

to

Max

2019

Make

☒ Jeep☐ AcuraOver 5 thousand matches near you | [Save Search](#)

Sort by: Relevance: Best Match

[Clear All](#) [Home Delivery](#) [Min Price: \\$2,000](#) [Jeep](#) [Wrangler](#) [Used](#)

Get the latest listings by email

Email

[Sign Up](#)

USED

\$28,159 | 15,558 mi.

2016 Jeep Wrangler Sahara

GOOD DEAL

Ext. Color: Black
Int. Color: BlackTransmission: Manual
Drivetrain: 4x4/4-wheel drive

Free CARFAX 1-Owner Report

Novak Motors (631) 881-4304

★★★★★ 4.9 (259 reviews) | 29 mi. from 10001

[Check Availability](#)

USED

\$17,491 | 88,284 mi.

2013 Jeep Wrangler Sport

GREAT DEAL

Ext. Color: Blue

Transmission: Automatic

cars.com



USED

 Save  Compare

\$37,985 | 3,236 mi.

2018 Jeep Wrangler Rubicon

 **GOOD DEAL**  **HOT CAR**

Ext. Color: Silver

Transmission: Manual

Int. Color: Black

Drivetrain: 4x4/4-wheel drive

 **Free CARFAX Report**

Payless Car Sales (907) 202-9695

★★★★★ 5 (150 reviews) | 3351 mi. from 10001

[Check Availability](#)

Prev

Next

1 2 3 4 5 ... 50

100 Per Page 



USED

 Save ☐ Compare

\$37,985 | 3,236 mi.

2018 Jeep Wrangler Rubicon



GOOD DEAL



HOT CAR

Ext. Color: Silver

Int. Color: Black

Transmission: Manual

Drivetrain: 4x4/4-wheel drive



Free CARFAX Report

Payless Car Sales (907) 202-9695

★★★★★ 5 (150 reviews) | 3351 mi. from 10001

Check Availability

Prev

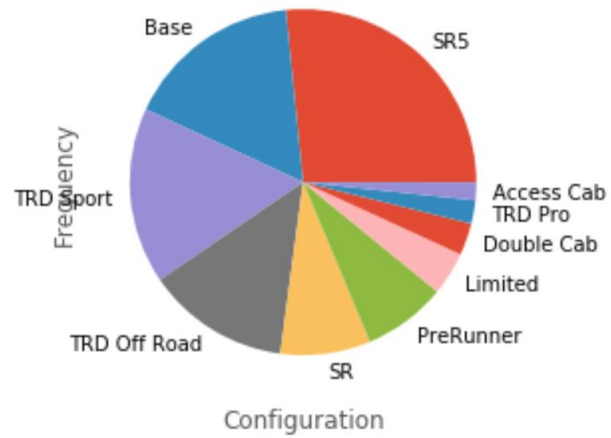
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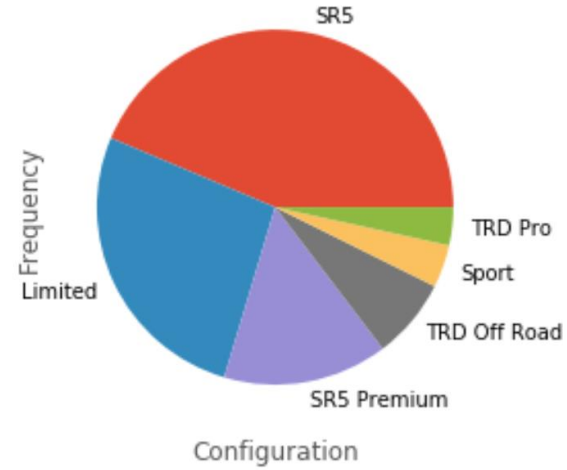
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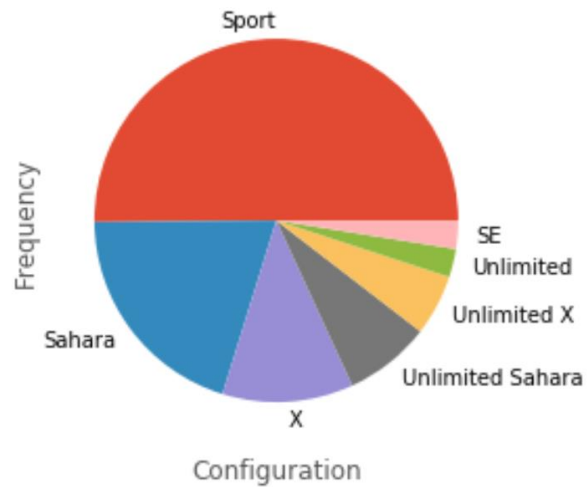
Toyota Tacoma-Configuration Plot



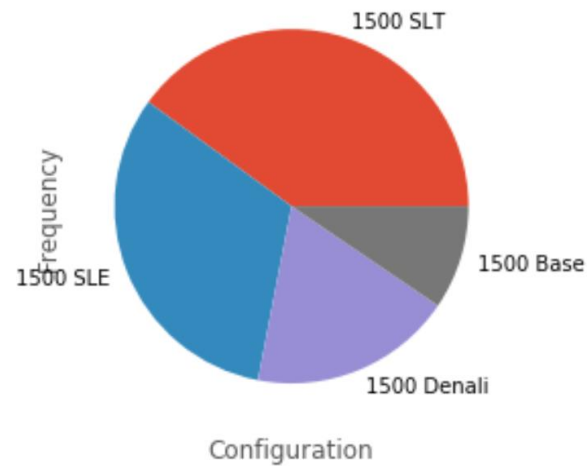
Toyota 4Runner-Configuration Plot



Jeep Wrangler-Configuration Plot

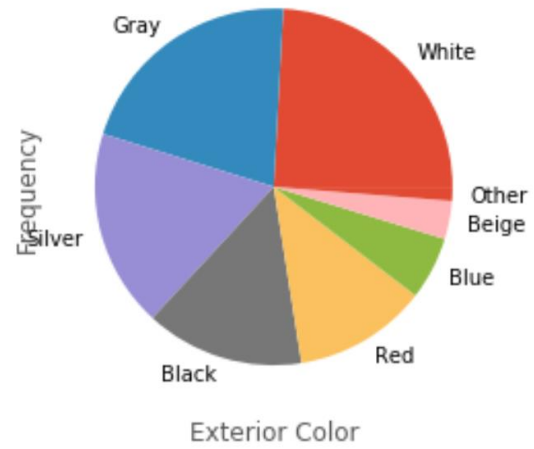


GMC Sierra-Configuration Plot

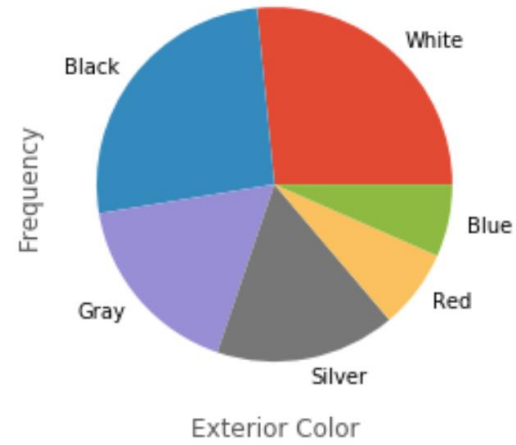


Configuration

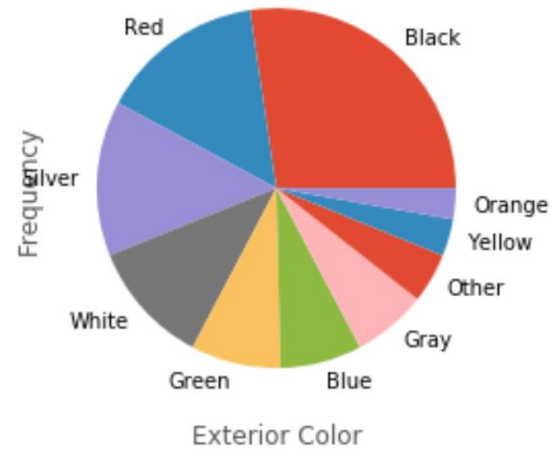
Toyota Tacoma-Exterior Color



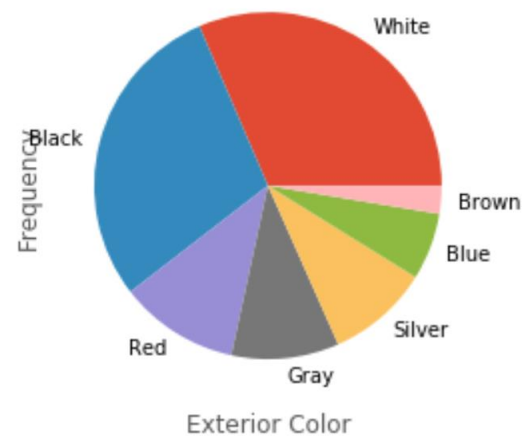
Toyota 4Runner-Exterior Color



Jeep Wrangler-Exterior Color

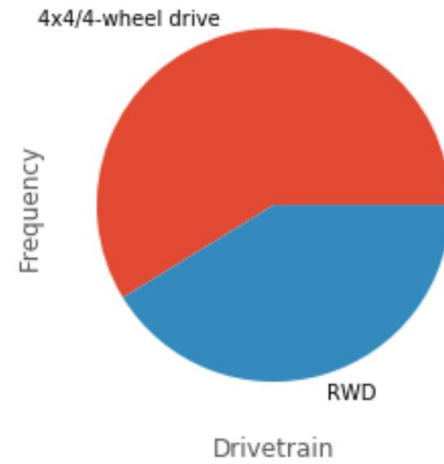


GMC Sierra-Exterior Color

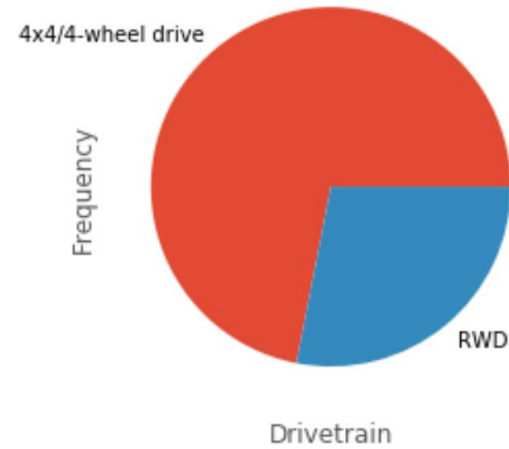


Exterior Color

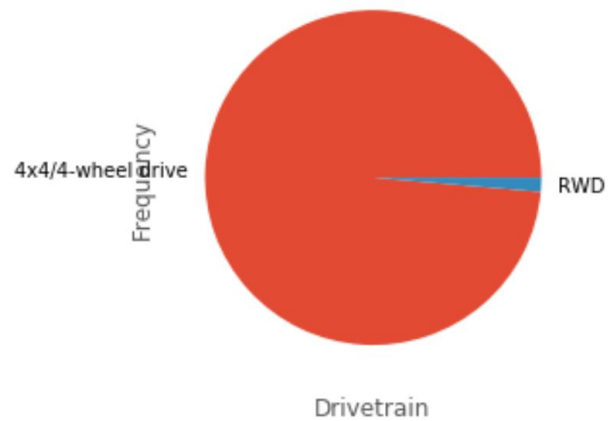
Toyota Tacoma-Drivetrain



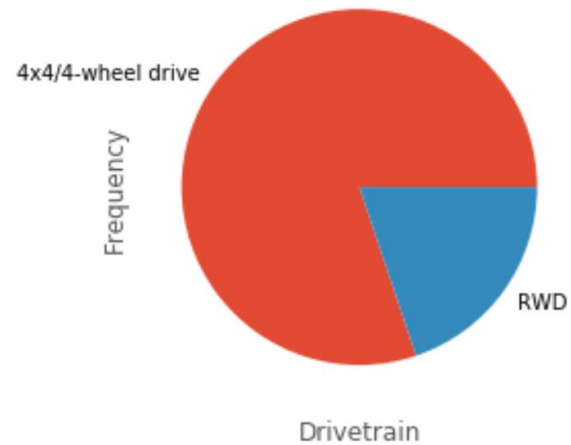
Toyota 4Runner-Drivetrain



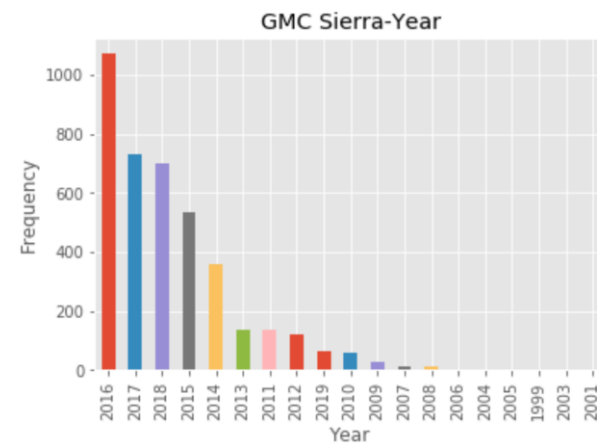
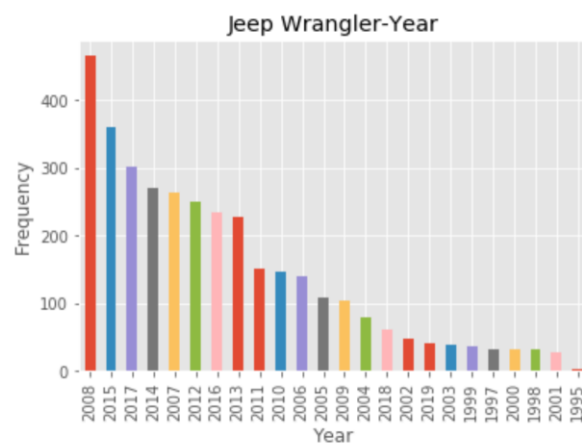
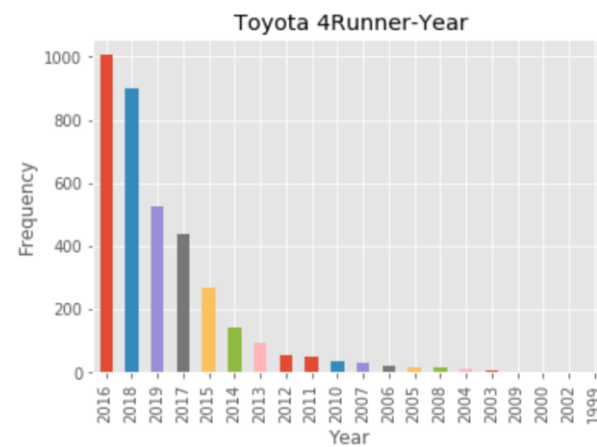
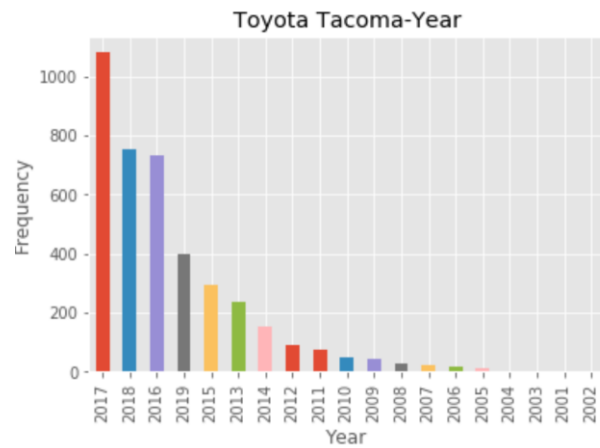
Jeep Wrangler-Drivetrain



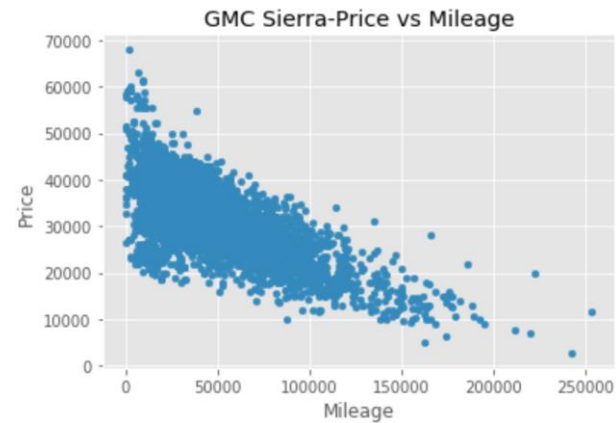
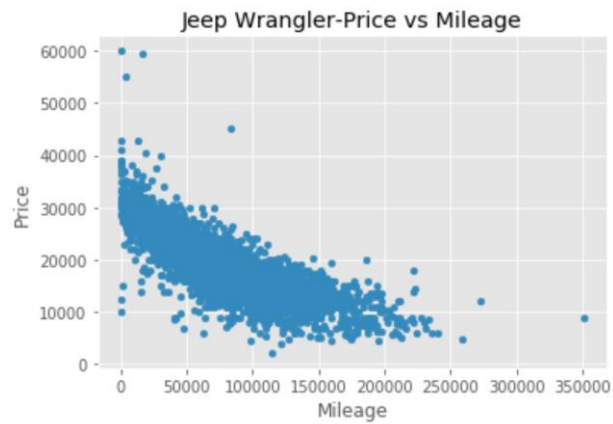
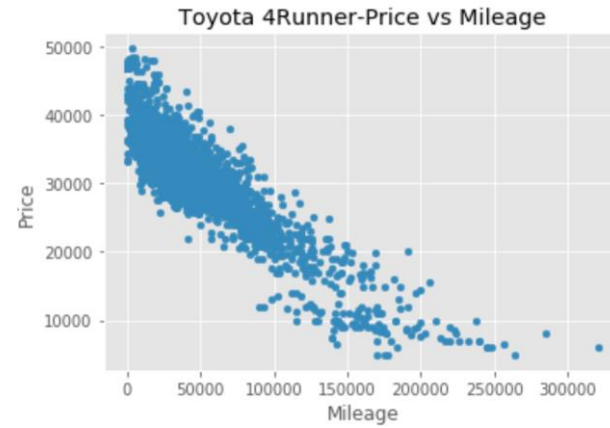
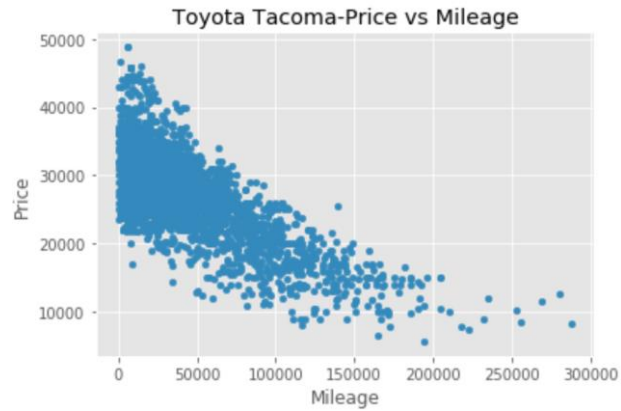
GMC Sierra-Drivetrain



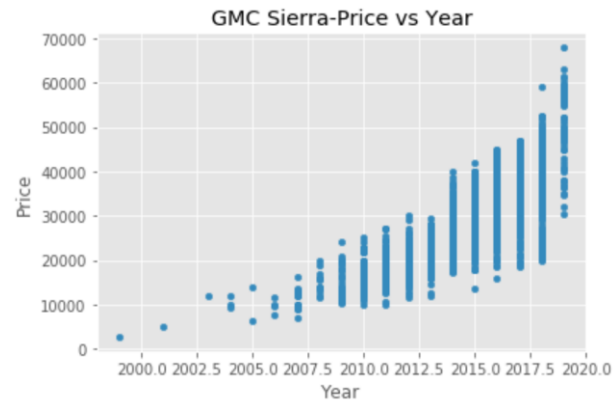
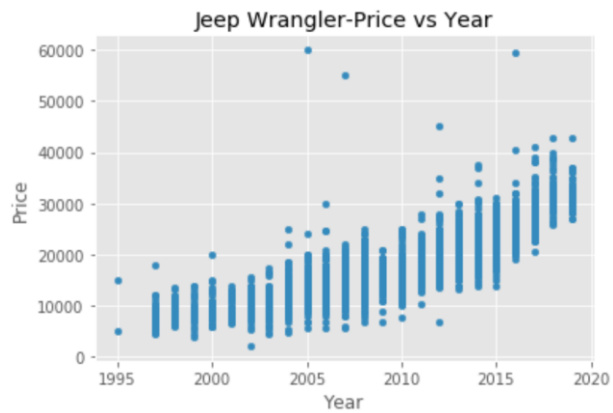
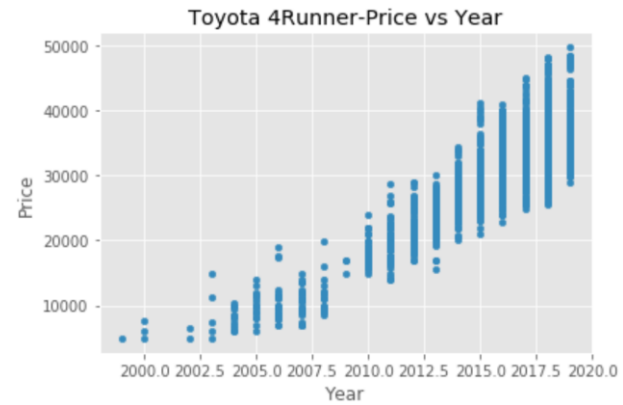
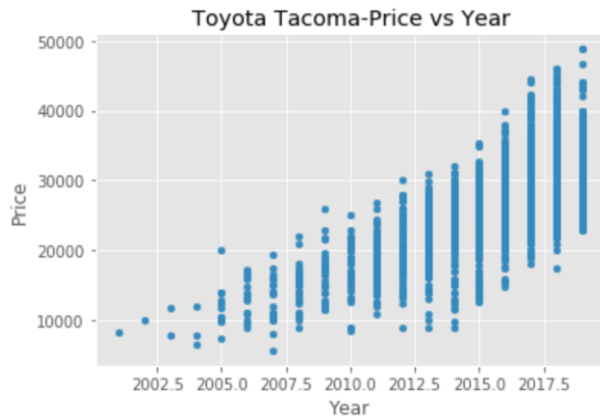
Drivetrain



Year

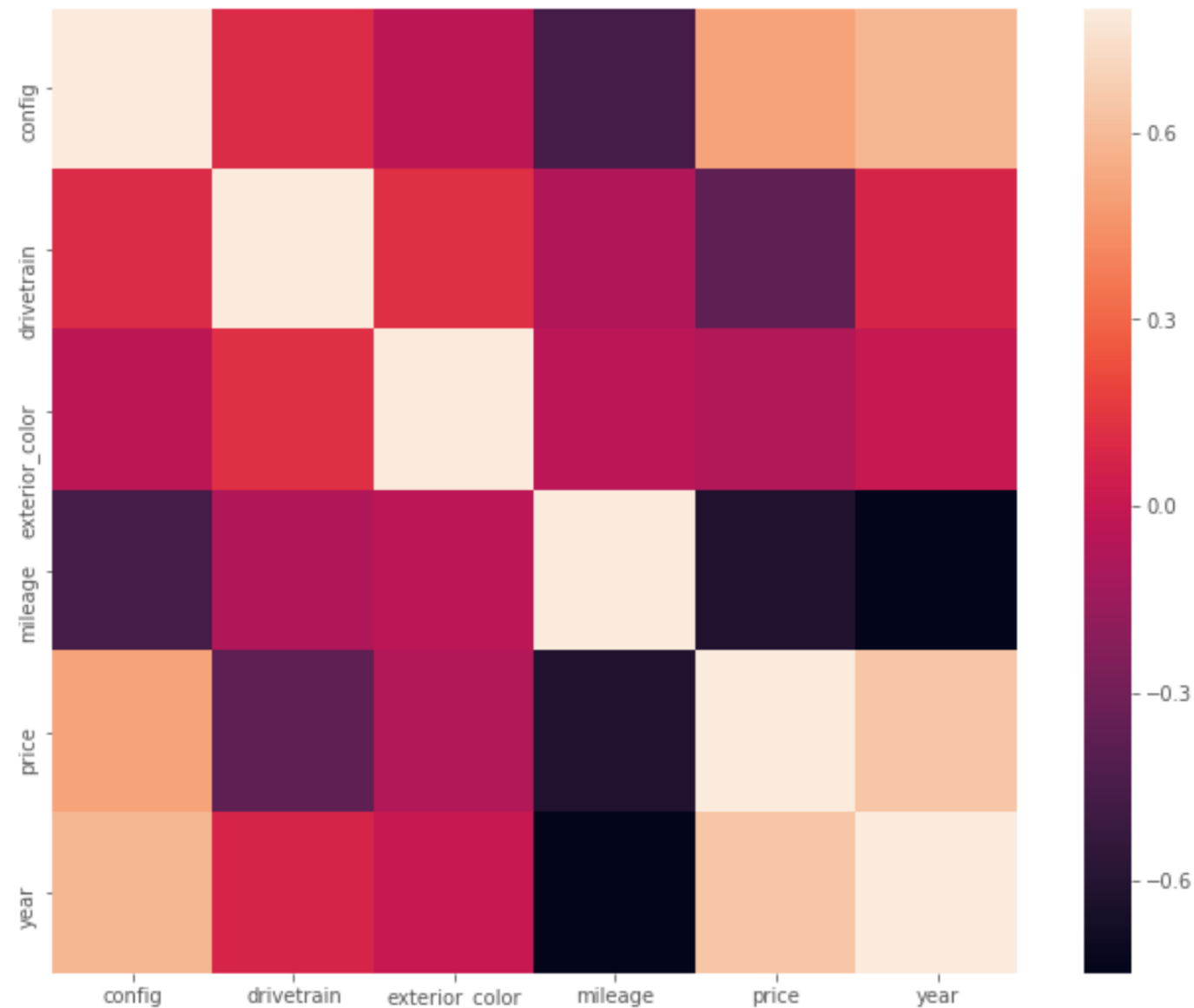


Price vs Mileage



Price vs Year

Correlation Matrix





The bad boy!
Lincoln MKS

	36 months	60 months
Jeep Wrangler	0.88	0.80
Toyota Tacoma	0.84	0.74
Toyota 4Runner	0.84	0.73
Toyota Tundra	0.83	0.72
GMC Sierra 1500	0.80	0.67
<u>Lincoln MKS</u>	<u>0.79</u>	<u>0.65</u>

Linear Regression

- $X = \text{Year}$, $Y = \text{Price}$
- 36 months = Predicted Price in 2016/Predicted Price in 2019
- 60 months = Predicted Price in 2014/Predicted Price in 2019

Toyota Tacoma	45000 miles	75000 miles
Toyota Tacoma	0.83	0.71
Toyota Tundra	0.82	0.71
GMC Sierra 1500	0.81	0.69
Toyota 4Runner	0.81	0.69
Jeep Wrangler	0.81	0.69
<u>Lincoln MKS</u>	<u>0.76</u>	<u>0.60</u>

Linear Regression

- X = Mileage, Y = Price
- 45000 mile = Predicted Price of 45000 miles/Predicted Price of 0 miles
- 75000 mile = Predicted Price of 75000 miles/Predicted Price of 0 miles

| Future Research

Why are my numbers so different from Kelley blue book numbers?

What are the machine learning models that I can use to predict the resale price of a specific car?

Are those five cars really have the best resale values?



Thank you!