

PRICE SUGGESTION FOR AUCTIONEXPORT.COM

GROUP 09

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About Auction Export...

- An online second hand vehicle auction
- Connects people who sell out their vehicles with prospective buyers
- This website enables their customers to advertise their vehicles for a fixed price as well as for bidding
- Started in 2007, in the USA and Canada
- Current client base extends up to 79 countries



About the data set...

Variable	Description
<i>index</i>	Index number of the vehicle
<i>price</i>	The sale price of the vehicle in the ad
<i>years</i>	The vehicle registration year
<i>brand</i>	The brand of car
<i>model</i>	Model of the vehicle
<i>title_status</i>	Clean Vehicle/Salvage Insurance
<i>color</i>	Color of the vehicle

- 13 *variables*
- 2499 *observations*

About the data set...

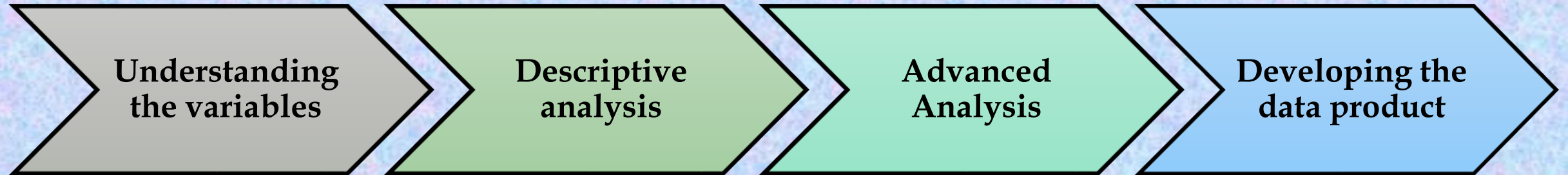
Variable	Description
<i>Mileage</i>	Miles travel by vehicle
<i>Vin</i>	The vehicle identification number is a collection of 17 characters (digits and capital letters)
<i>Lot</i>	A lot number is an identification number assigned to a particular quantity or lot of material from a single manufacturer. For cars, a lot number is combined with a serial number to form the Vehicle Identification Number.
<i>Condition</i>	Time to the end of the auction from the snapshot date
<i>State</i>	The state in which the car is being available for purchase
<i>Country</i>	The country in which the car is being available for purchase

Objective

- **Price** is the *only* predictable variable
- Price is the amount of money advertised on the website by an owner for his vehicle
- It makes sense to suggest a price that will attract the customers
- Thus our objective:

“Providing the owners with an estimate of the price they could demand for their vehicle, in order to attract customers.”

The Way We Hope to Answer the Question



Into the data set...



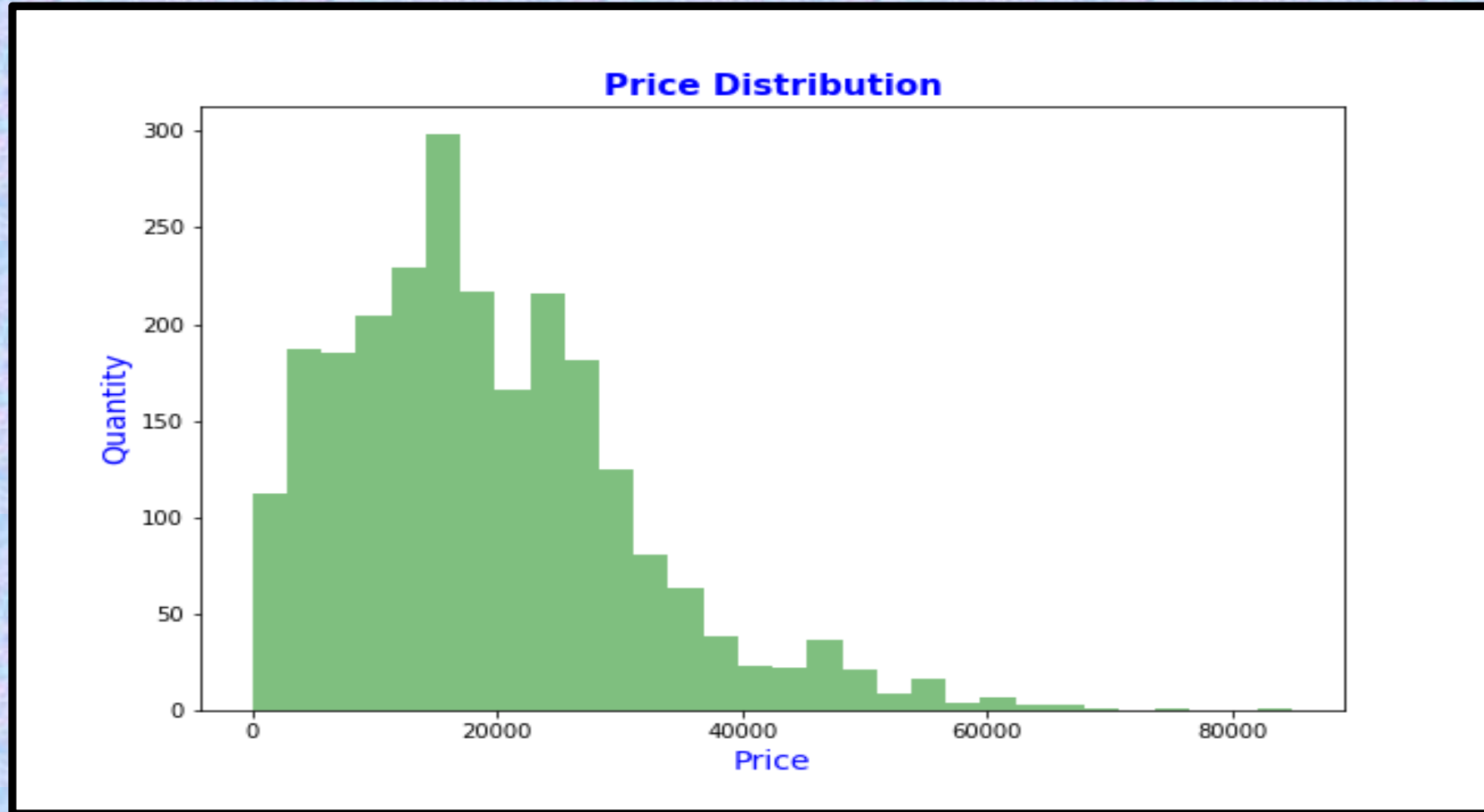
Price

There were 43 vehicles with price = \$0

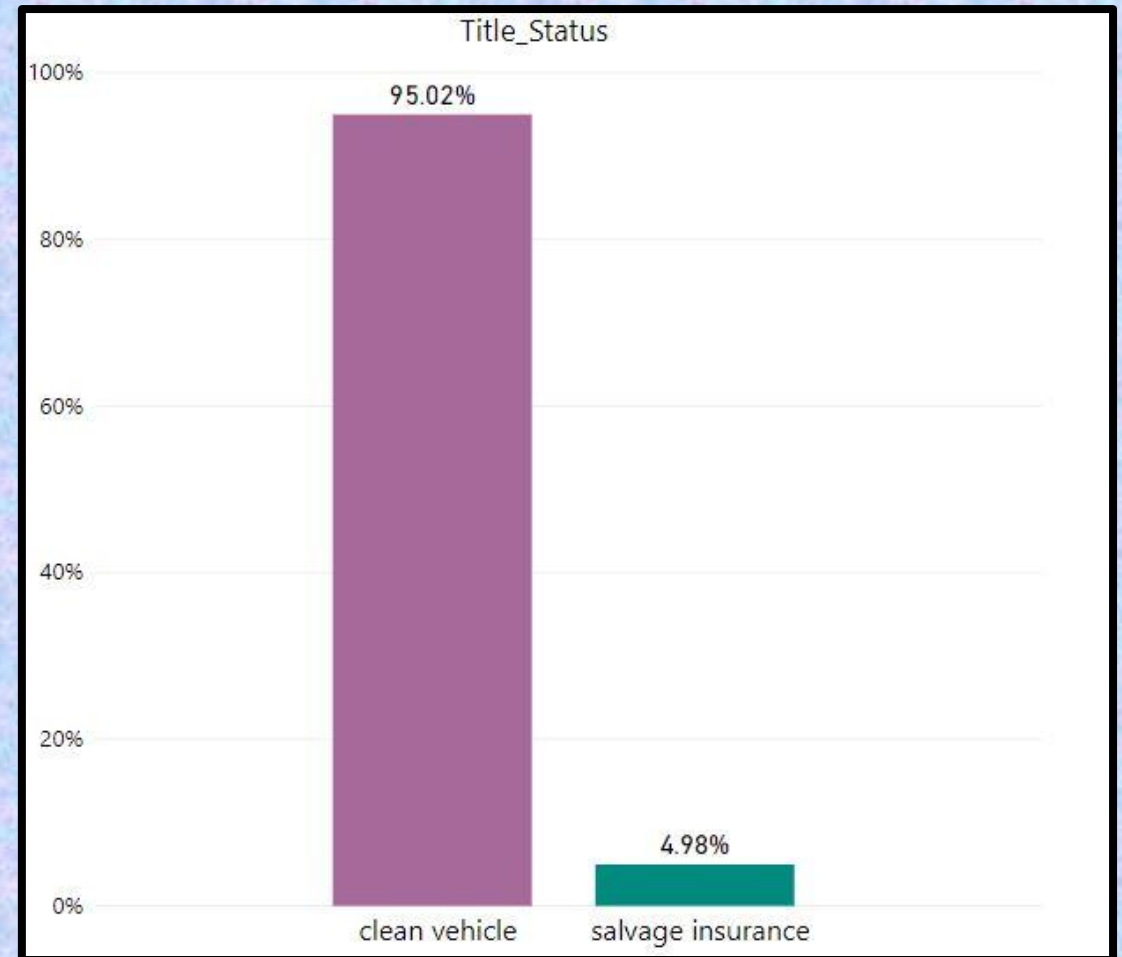
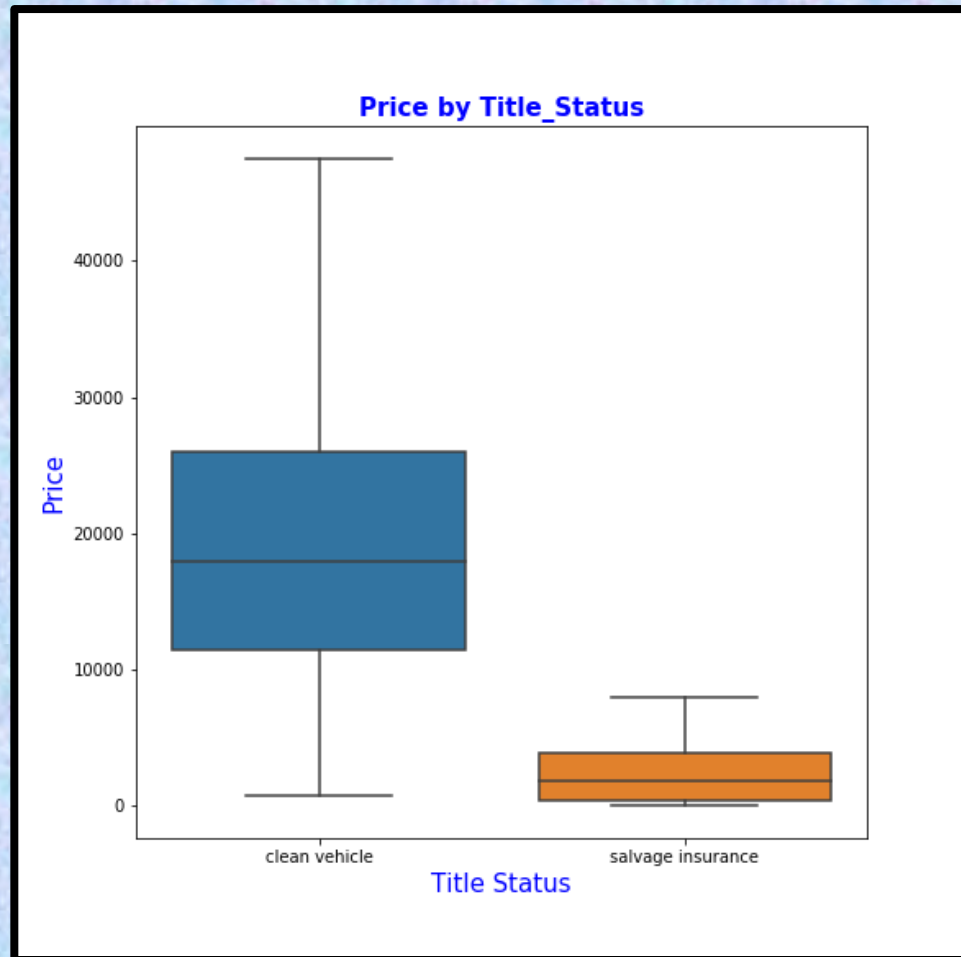
- *Tracked the vehicles using Vin code*
- *No customers have placed a bid and the owner hasn't demanded an amount*
- *Discarded all the vehicles with price = 0*



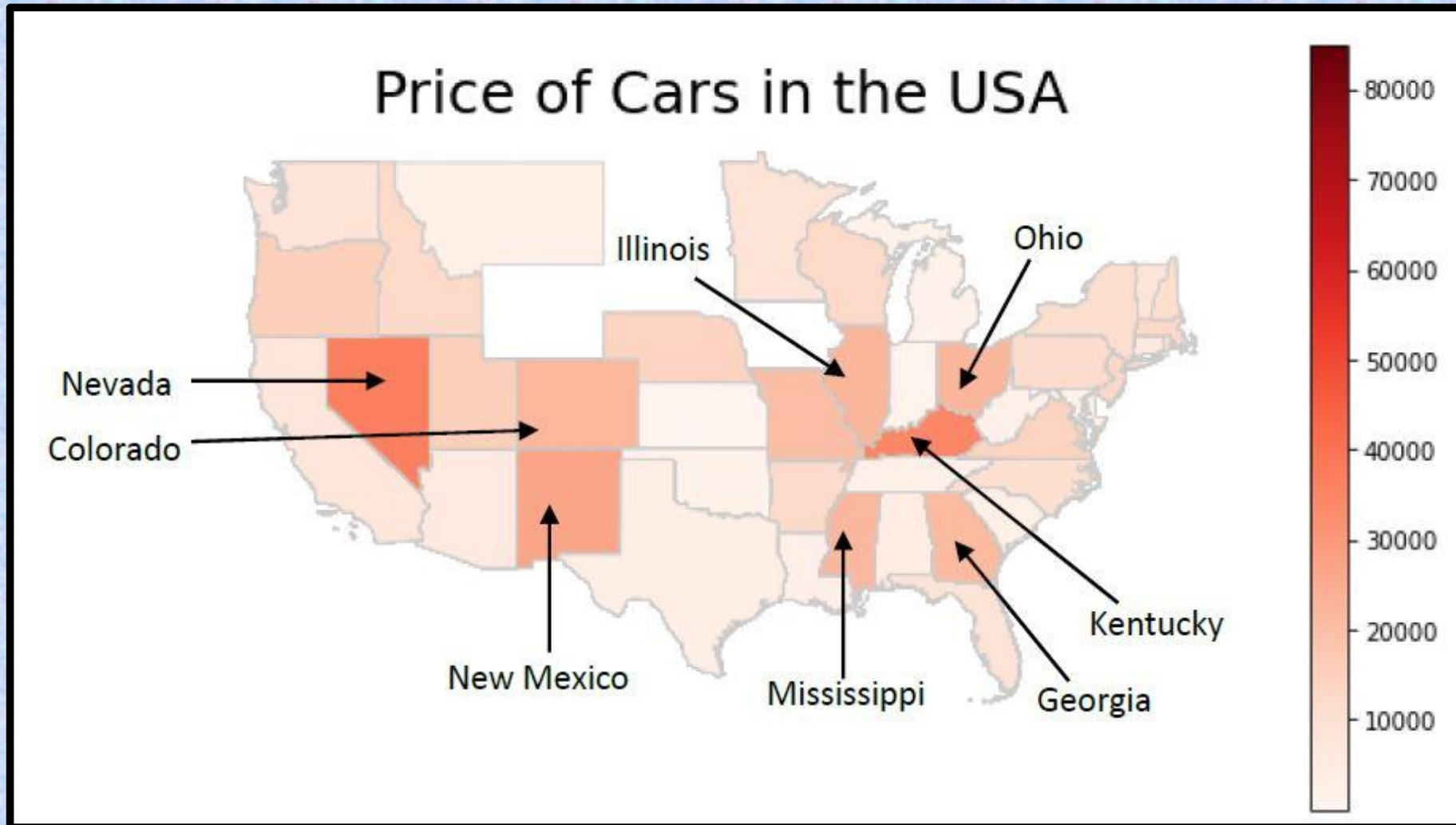
Distribution of Price



Price by Title Status

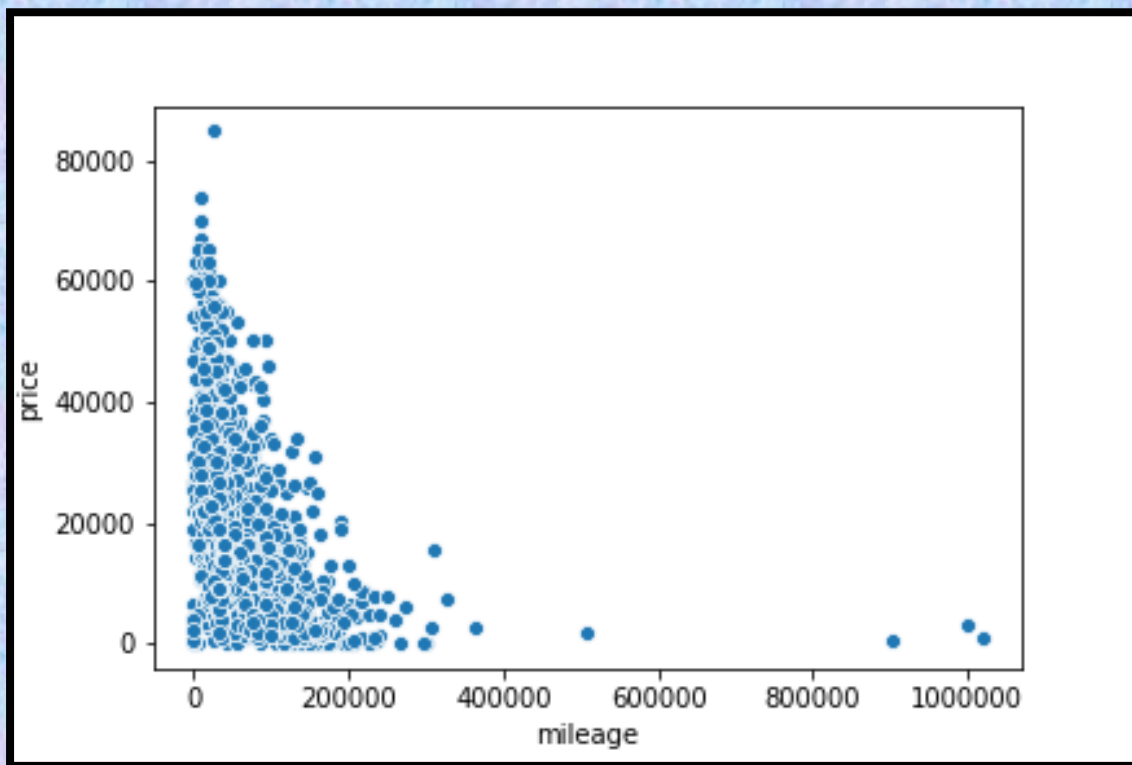


Price Vs States

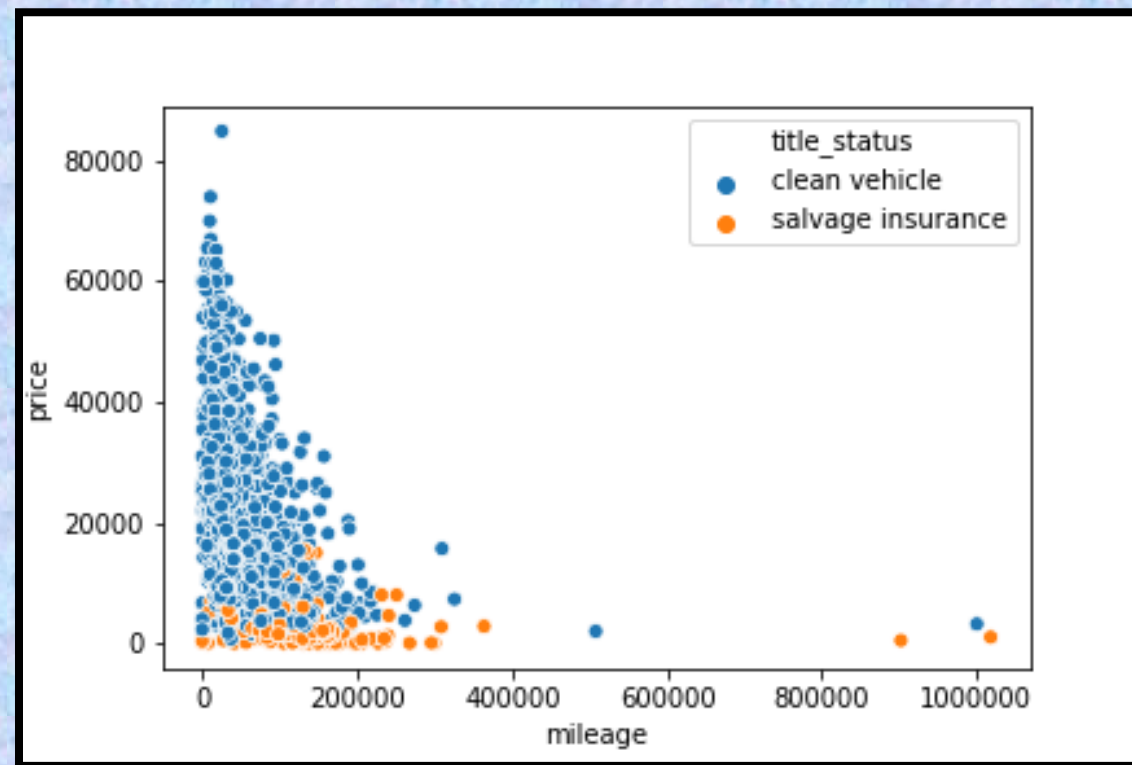


Price Vs Mileage

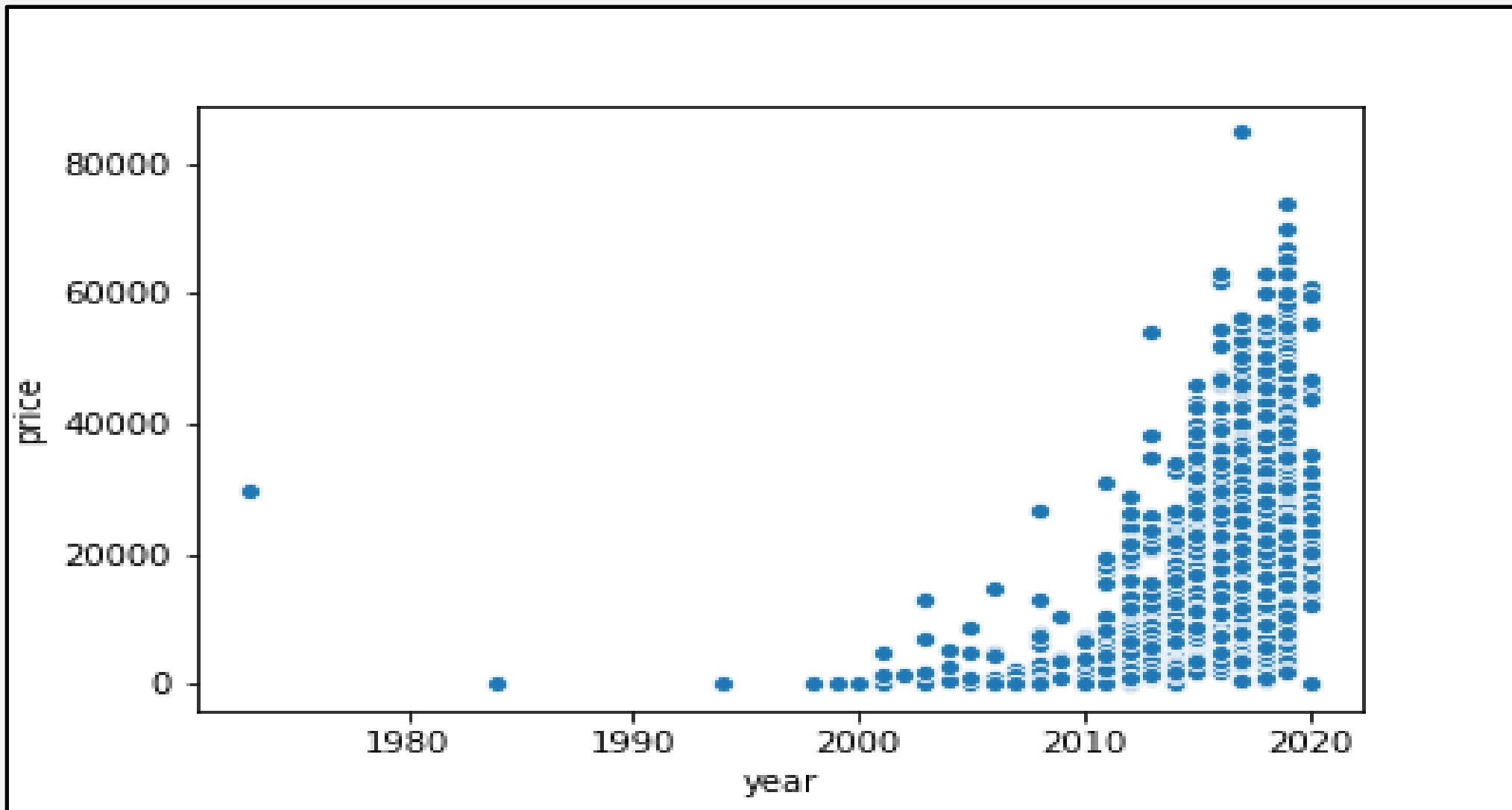
Price Vs Mileage



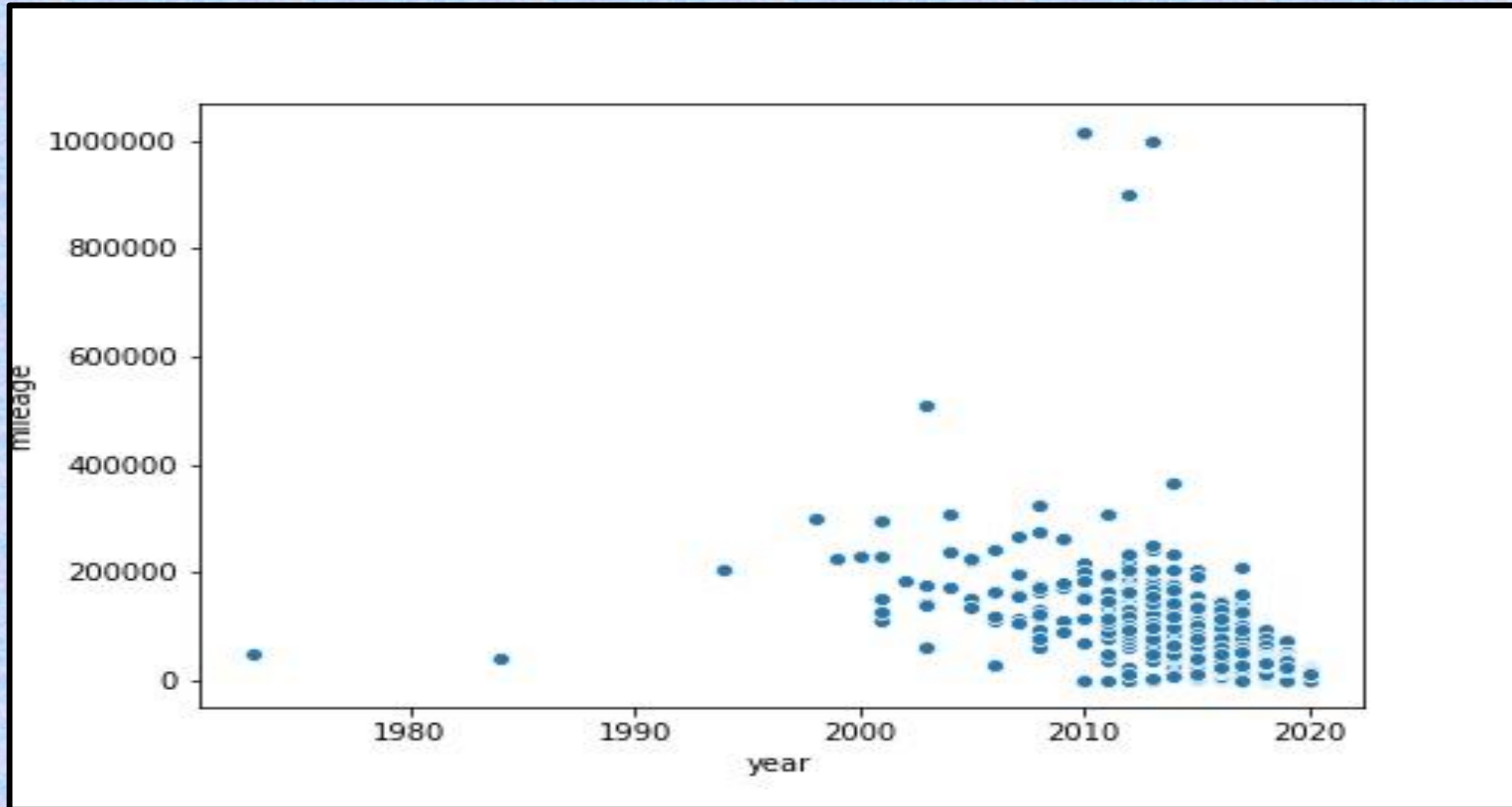
Price Vs Mileage by Title_status



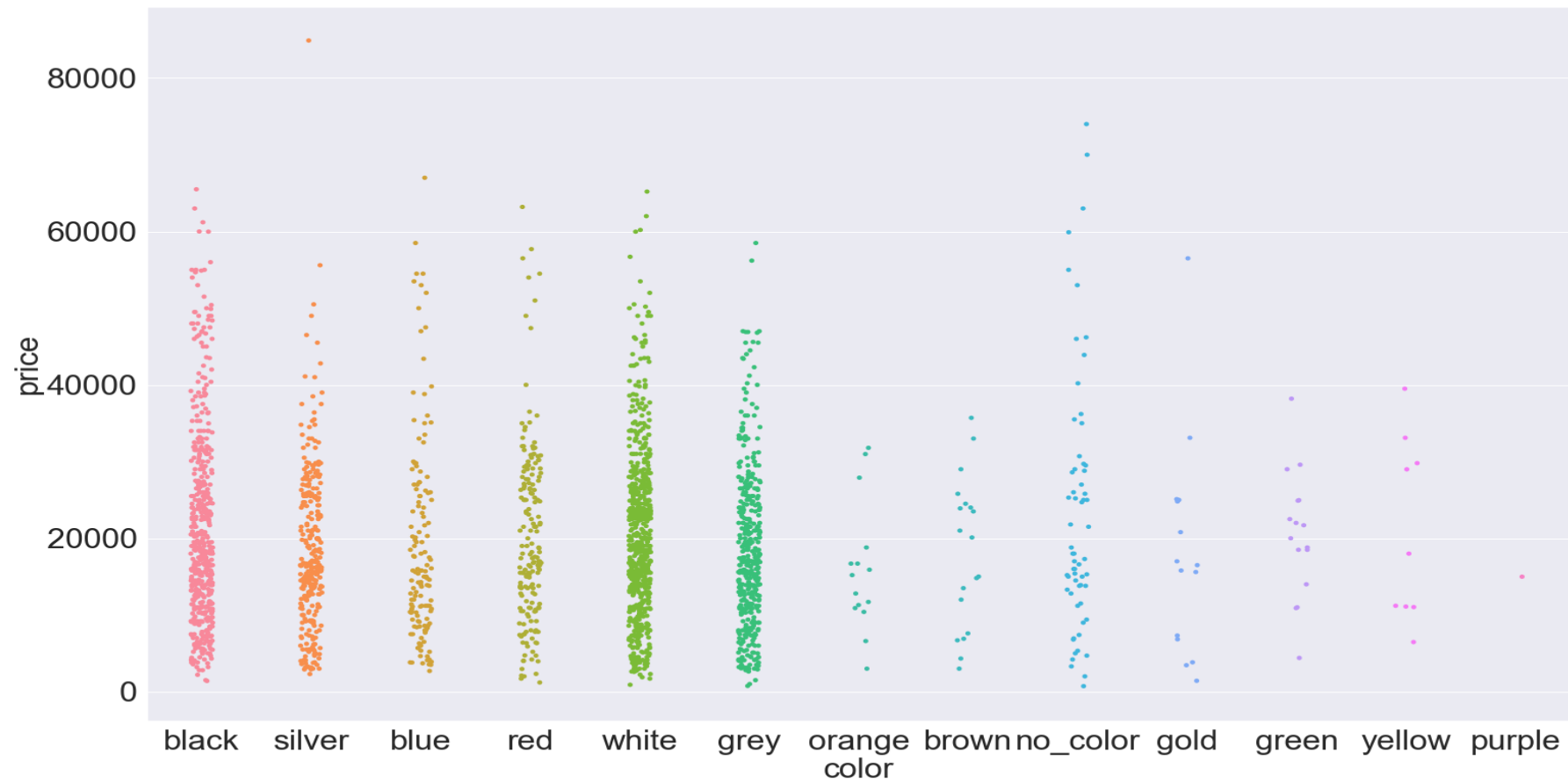
Price Vs Year



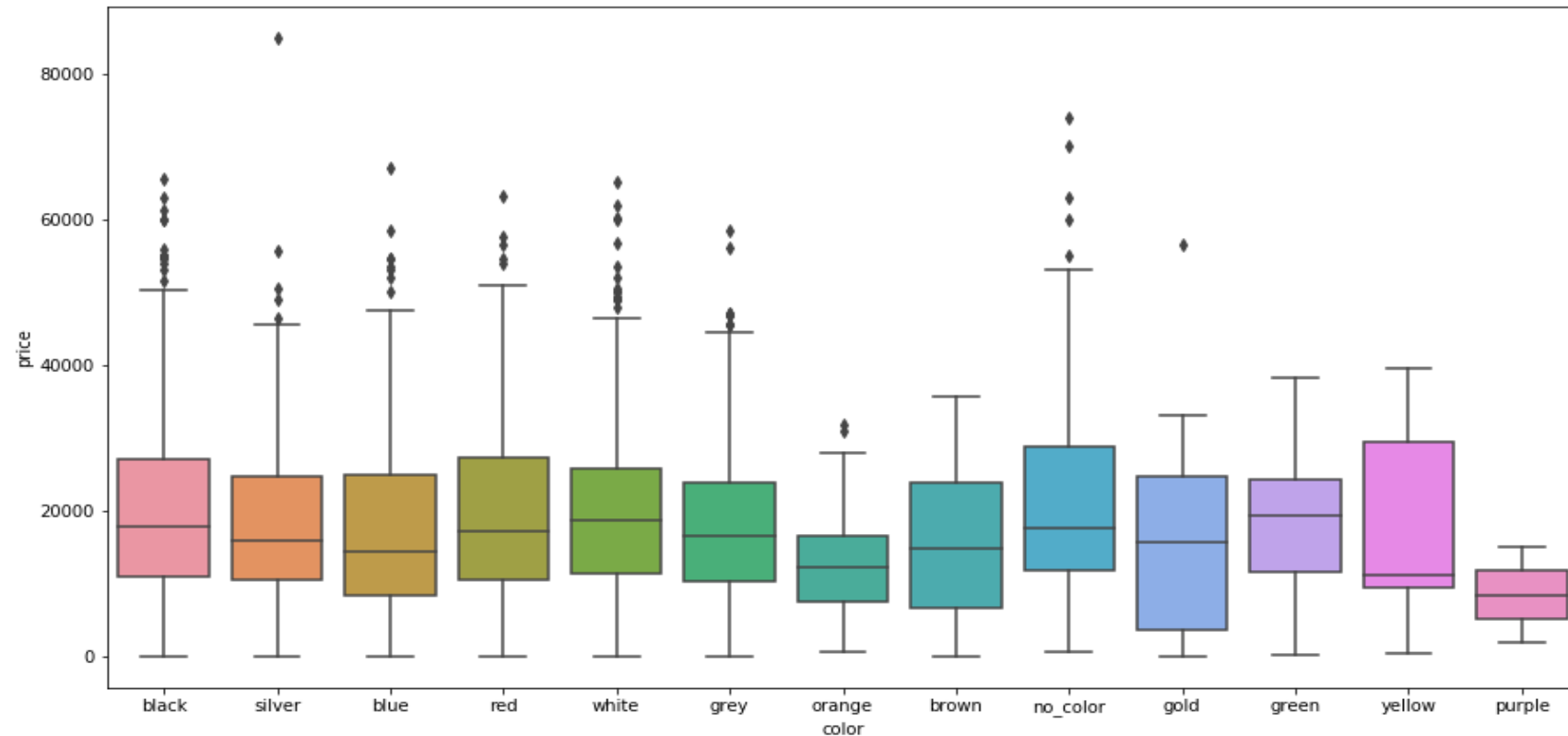
Mileage vs Year



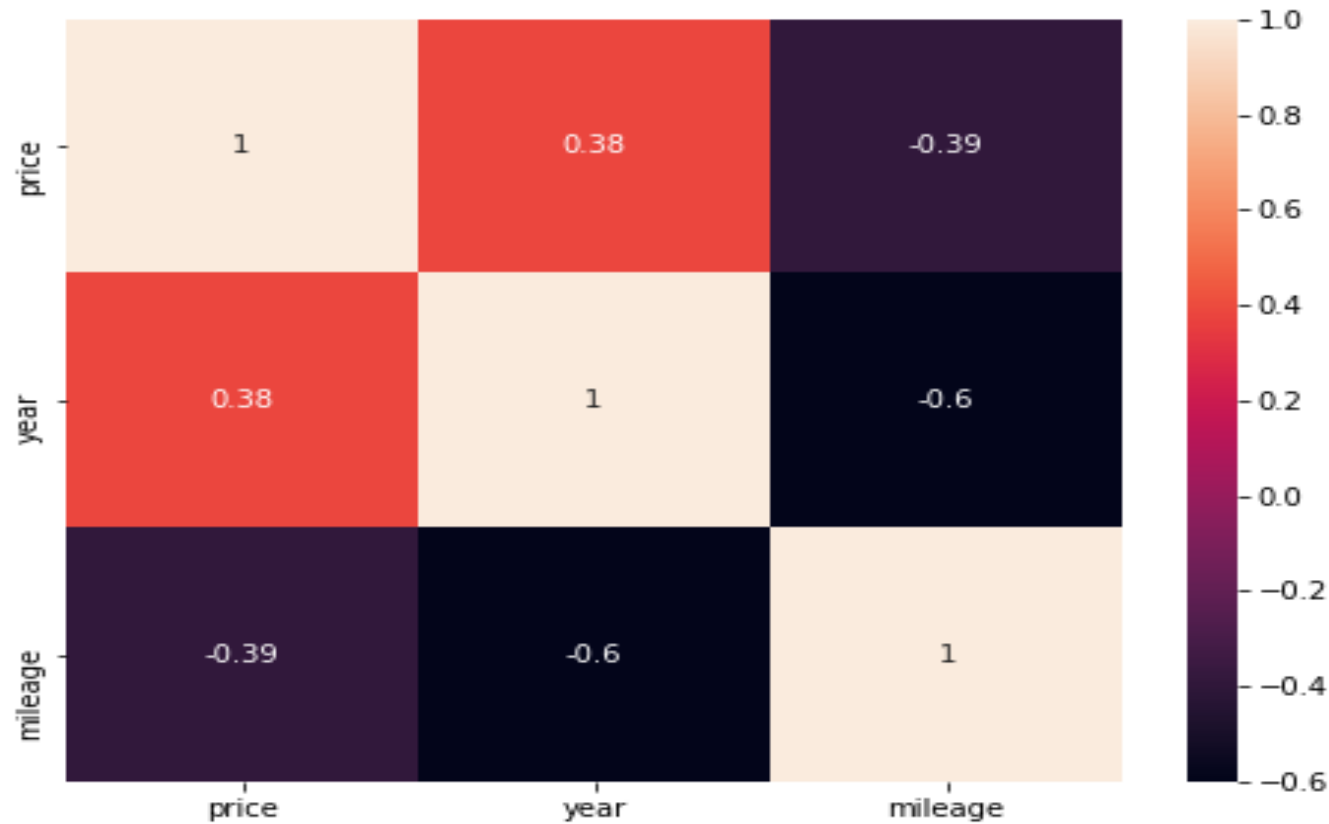
Price by Colors



Price by colors



Correlation plot



Suggestions For Advanced Analysis

- Ridge Regression
- Lasso Regression
- Elastic Net Regression
- Random Forest
- Decision Tree
- Boosting

References

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THANK
YOU ...

