CAPSTONE PROJECT

CARSALES.COM.AU

1. PROBLEM STATEMENT

	VW Golf	Opel Astra	Ford Focus	Toyota Corolla
Price (1000 $)	16.2	14.9	14.0	15.2
Fuel Efficiency (per 100 km)	7.2	7.0	7.5	8.2
Power (kW)	66.0	62.0	55	71

Which one to buy if I want powerful, fuel efficient and cheap car?

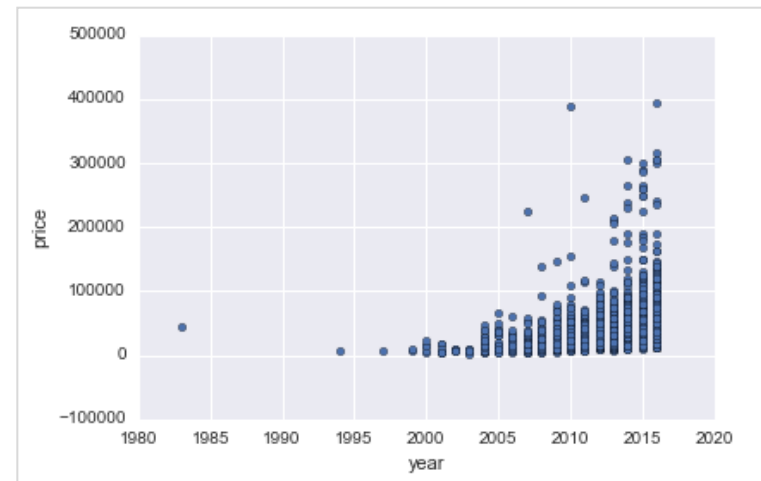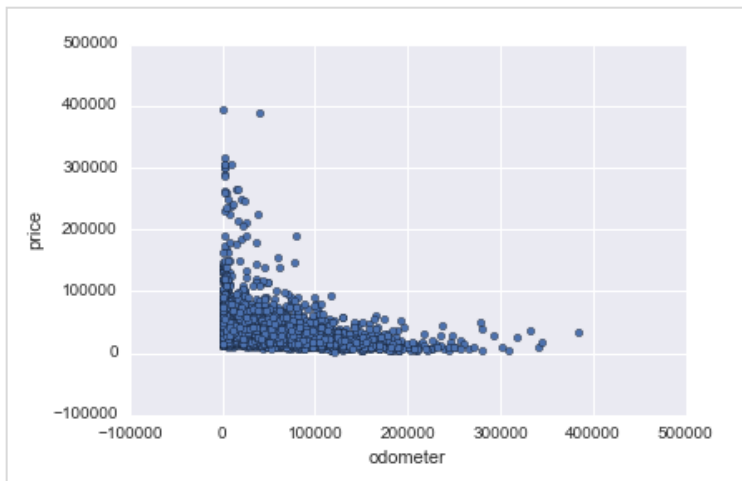Method - Multi-Objective Optimization

2. DATA SCRAPING

- - After cleaning data and removing duplicates: 2905 cars

- - Binning by fuel efficiency
- - so we can assume that the data set is balanced.

- 4 L/100km or less
- 5 L/100km or less
- 7 L/100km or less
- 9 L/100km or less
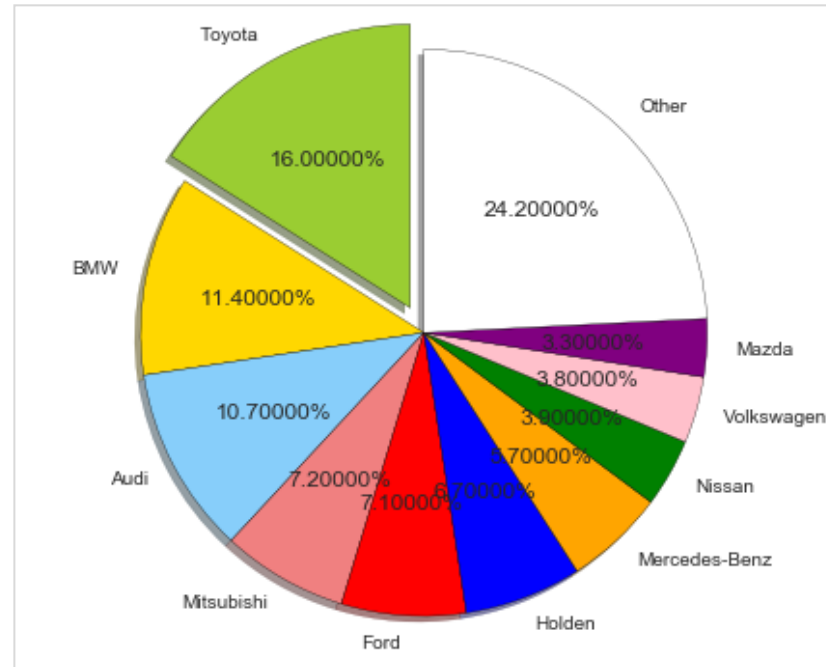- 11L/100km or less
- 11L/100km or more

3. DATA WRANGLING

Linear correlation coefficients:

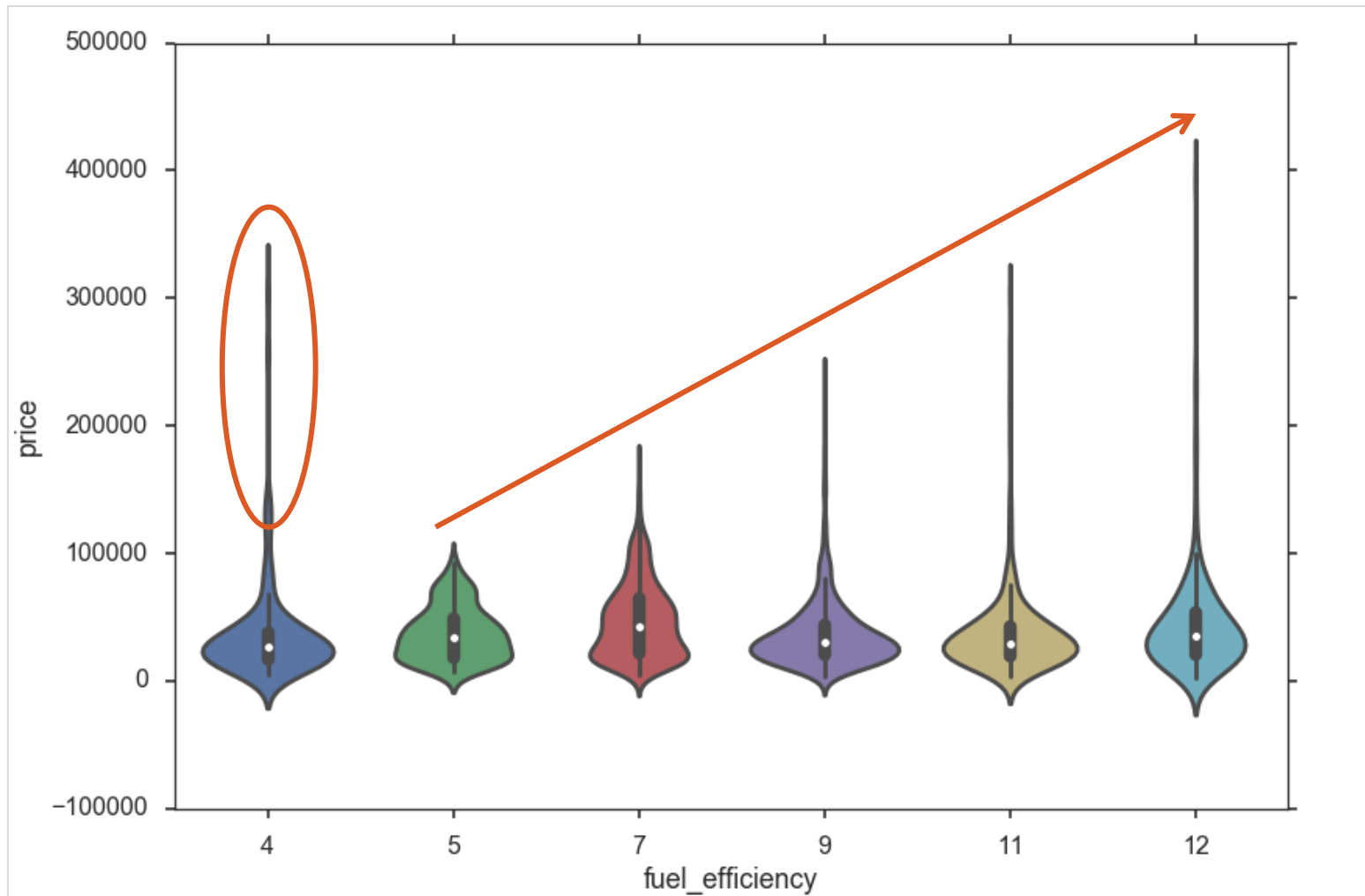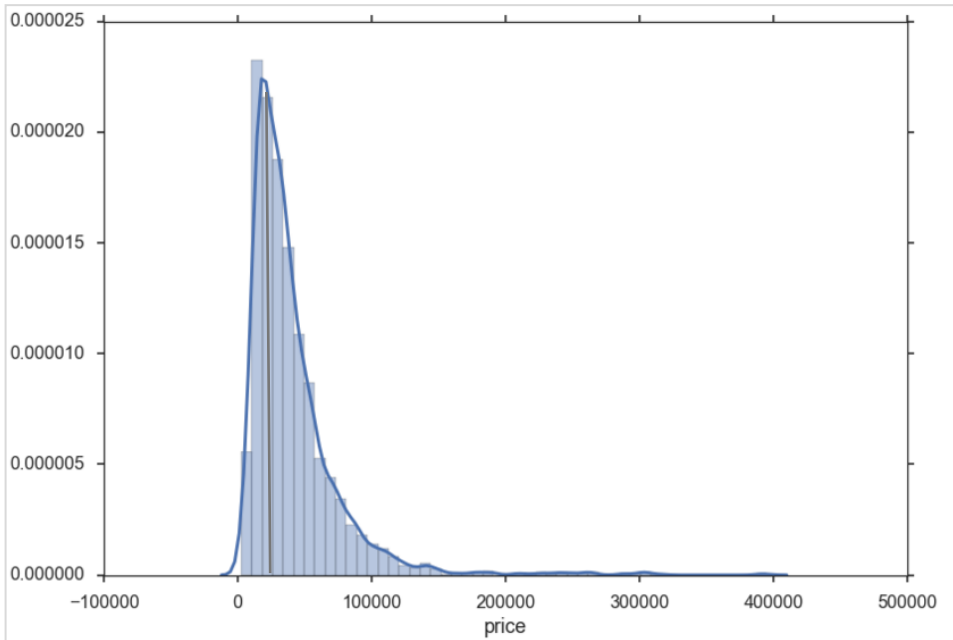|	fuel_efficiency	price	year	odometer	Number of cylinders	capacity
fuel_efficiency	1.000000	-0.005104	-0.382246	0.359213	0.619098	0.712716
price	-0.005104	1.000000	0.349844	-0.356435	0.263397	0.205220
year	-0.382246	0.349844	1.000000	-0.781987	-0.282250	-0.278190
odometer	0.359213	-0.356435	-0.781987	1.000000	0.226298	0.261757
Number of cylinders	0.619098	0.263397	-0.282250	0.226298	1.000000	0.901489
capacity	0.712716	0.205220	-0.278190	0.261757	0.901489	1.000000

4.DATA VISUALIZATION
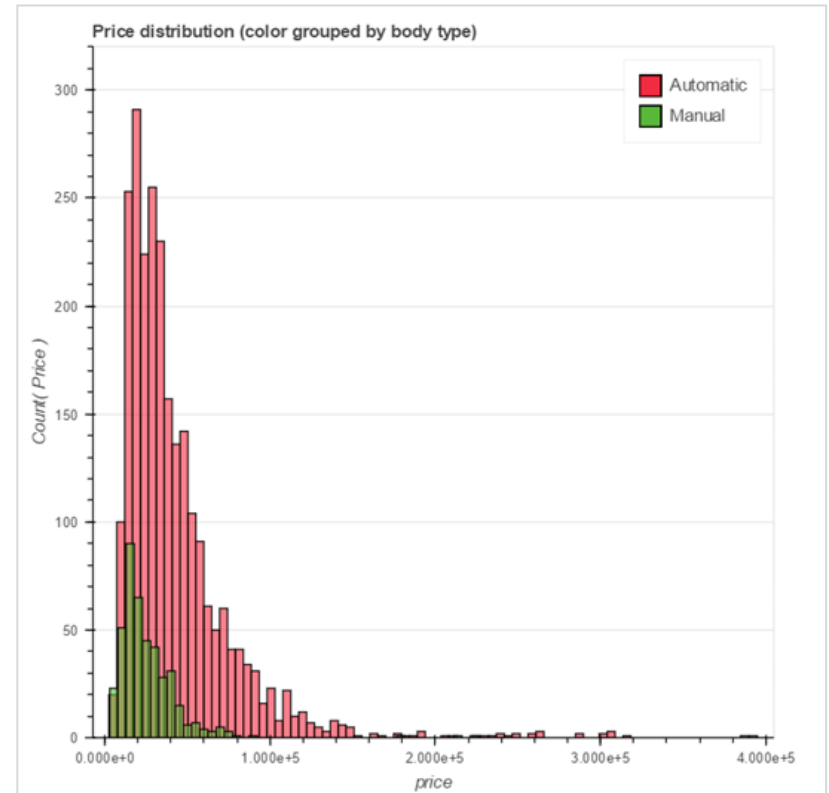

Distribution by car make

4.DATA VISUALIZATION

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Price distribution for whole data set

Price distribution by transmission type