Program 6 Pandas Questions

1. the average (mean) odometer reading for 6-cylinder vehicles; be sure to remove records with no odometer reading first

106979.54

1. the average price for SUV's; exclude prices of 0

$16,263.00

1. the average price for pickups and trucks (consider as a single group); exclude prices of 0

$37,488.47

1. the number of vehicles by fuel type for each manufacturer, listed in alphabetic order; ignore null manufacture and null fuel type

Below a list of all manufacturers in alphabetical order with the different fuel types and the number of vehicles for the matching manufacturer and fuel type (if 0 vehicles matched for a manufacturer and specific fuel type, then it is left out).

NOTE: The first three manufacturers and their fuel types listed are from the provided data file, but they seem to be out of place or messed up, they have a space as the first character, so they come first alphabetically, but the values were in the manufacturer and fuel columns from the provided dataset.

Manufacturer: GL 550 | Fuel Type: Ml Class | Number of Vehicles: 2

Manufacturer: bmw | Fuel Type: 1-Series | Number of Vehicles: 11

Manufacturer: gla | Fuel Type: BMW | Number of Vehicles: 11

Manufacturer: acura | Fuel Type: diesel | Number of Vehicles: 5

Manufacturer: acura | Fuel Type: gas | Number of Vehicles: 3397

Manufacturer: acura | Fuel Type: hybrid | Number of Vehicles: 10

Manufacturer: acura | Fuel Type: other | Number of Vehicles: 42

Manufacturer: alfa-romeo | Fuel Type: gas | Number of Vehicles: 64

Manufacturer: alfa-romeo | Fuel Type: other | Number of Vehicles: 3

Manufacturer: aston-martin | Fuel Type: gas | Number of Vehicles: 34

Manufacturer: audi | Fuel Type: diesel | Number of Vehicles: 200

Manufacturer: audi | Fuel Type: electric | Number of Vehicles: 4

Manufacturer: audi | Fuel Type: gas | Number of Vehicles: 4671

Manufacturer: audi | Fuel Type: hybrid | Number of Vehicles: 13

Manufacturer: audi | Fuel Type: other | Number of Vehicles: 56

Manufacturer: bmw | Fuel Type: diesel | Number of Vehicles: 346

Manufacturer: bmw | Fuel Type: electric | Number of Vehicles: 125

Manufacturer: bmw | Fuel Type: gas | Number of Vehicles: 11751

Manufacturer: bmw | Fuel Type: hybrid | Number of Vehicles: 78

Manufacturer: bmw | Fuel Type: other | Number of Vehicles: 184

Manufacturer: buick | Fuel Type: diesel | Number of Vehicles: 4

Manufacturer: buick | Fuel Type: gas | Number of Vehicles: 5408

Manufacturer: buick | Fuel Type: hybrid | Number of Vehicles: 9

Manufacturer: buick | Fuel Type: other | Number of Vehicles: 136

Manufacturer: cadillac | Fuel Type: diesel | Number of Vehicles: 8

Manufacturer: cadillac | Fuel Type: electric | Number of Vehicles: 31

Manufacturer: cadillac | Fuel Type: gas | Number of Vehicles: 6059

Manufacturer: cadillac | Fuel Type: hybrid | Number of Vehicles: 30

Manufacturer: cadillac | Fuel Type: other | Number of Vehicles: 200

Manufacturer: chevrolet | Fuel Type: diesel | Number of Vehicles: 4474

Manufacturer: chevrolet | Fuel Type: electric | Number of Vehicles: 120

Manufacturer: chevrolet | Fuel Type: gas | Number of Vehicles: 54162

Manufacturer: chevrolet | Fuel Type: hybrid | Number of Vehicles: 260

Manufacturer: chevrolet | Fuel Type: other | Number of Vehicles: 2897

Manufacturer: chrysler | Fuel Type: diesel | Number of Vehicles: 4

Manufacturer: chrysler | Fuel Type: gas | Number of Vehicles: 6321

Manufacturer: chrysler | Fuel Type: hybrid | Number of Vehicles: 9

Manufacturer: chrysler | Fuel Type: other | Number of Vehicles: 207

Manufacturer: datsun | Fuel Type: diesel | Number of Vehicles: 1

Manufacturer: datsun | Fuel Type: gas | Number of Vehicles: 70

Manufacturer: dodge | Fuel Type: diesel | Number of Vehicles: 574

Manufacturer: dodge | Fuel Type: electric | Number of Vehicles: 1

Manufacturer: dodge | Fuel Type: gas | Number of Vehicles: 13193

Manufacturer: dodge | Fuel Type: hybrid | Number of Vehicles: 7

Manufacturer: dodge | Fuel Type: other | Number of Vehicles: 544

Manufacturer: ferrari | Fuel Type: gas | Number of Vehicles: 77

Manufacturer: ferrari | Fuel Type: other | Number of Vehicles: 1

Manufacturer: fiat | Fuel Type: diesel | Number of Vehicles: 2

Manufacturer: fiat | Fuel Type: electric | Number of Vehicles: 57

Manufacturer: fiat | Fuel Type: gas | Number of Vehicles: 835

Manufacturer: fiat | Fuel Type: other | Number of Vehicles: 41

Manufacturer: ford | Fuel Type: diesel | Number of Vehicles: 12404

Manufacturer: ford | Fuel Type: electric | Number of Vehicles: 37

Manufacturer: ford | Fuel Type: gas | Number of Vehicles: 61437

Manufacturer: ford | Fuel Type: hybrid | Number of Vehicles: 599

Manufacturer: ford | Fuel Type: other | Number of Vehicles: 3170

Manufacturer: gmc | Fuel Type: diesel | Number of Vehicles: 2595

Manufacturer: gmc | Fuel Type: electric | Number of Vehicles: 1

Manufacturer: gmc | Fuel Type: gas | Number of Vehicles: 15012

Manufacturer: gmc | Fuel Type: hybrid | Number of Vehicles: 27

Manufacturer: gmc | Fuel Type: other | Number of Vehicles: 858

Manufacturer: harley-davidson | Fuel Type: diesel | Number of Vehicles: 23

Manufacturer: harley-davidson | Fuel Type: gas | Number of Vehicles: 109

Manufacturer: harley-davidson | Fuel Type: other | Number of Vehicles: 8

Manufacturer: honda | Fuel Type: diesel | Number of Vehicles: 15

Manufacturer: honda | Fuel Type: electric | Number of Vehicles: 1

Manufacturer: honda | Fuel Type: gas | Number of Vehicles: 21725

Manufacturer: honda | Fuel Type: hybrid | Number of Vehicles: 275

Manufacturer: honda | Fuel Type: other | Number of Vehicles: 313

Manufacturer: hyundai | Fuel Type: diesel | Number of Vehicles: 5

Manufacturer: hyundai | Fuel Type: electric | Number of Vehicles: 14

Manufacturer: hyundai | Fuel Type: gas | Number of Vehicles: 10160

Manufacturer: hyundai | Fuel Type: hybrid | Number of Vehicles: 113

Manufacturer: hyundai | Fuel Type: other | Number of Vehicles: 217

Manufacturer: infiniti | Fuel Type: electric | Number of Vehicles: 1

Manufacturer: infiniti | Fuel Type: gas | Number of Vehicles: 3321

Manufacturer: infiniti | Fuel Type: hybrid | Number of Vehicles: 16

Manufacturer: infiniti | Fuel Type: other | Number of Vehicles: 39

Manufacturer: jaguar | Fuel Type: diesel | Number of Vehicles: 6

Manufacturer: jaguar | Fuel Type: gas | Number of Vehicles: 875

Manufacturer: jaguar | Fuel Type: other | Number of Vehicles: 14

Manufacturer: jeep | Fuel Type: diesel | Number of Vehicles: 174

Manufacturer: jeep | Fuel Type: electric | Number of Vehicles: 1

Manufacturer: jeep | Fuel Type: gas | Number of Vehicles: 18837

Manufacturer: jeep | Fuel Type: hybrid | Number of Vehicles: 1

Manufacturer: jeep | Fuel Type: other | Number of Vehicles: 585

Manufacturer: kia | Fuel Type: diesel | Number of Vehicles: 1

Manufacturer: kia | Fuel Type: electric | Number of Vehicles: 6

Manufacturer: kia | Fuel Type: gas | Number of Vehicles: 7565

Manufacturer: kia | Fuel Type: hybrid | Number of Vehicles: 70

Manufacturer: kia | Fuel Type: other | Number of Vehicles: 134

Manufacturer: land rover | Fuel Type: gas | Number of Vehicles: 23

Manufacturer: lexus | Fuel Type: diesel | Number of Vehicles: 3

Manufacturer: lexus | Fuel Type: electric | Number of Vehicles: 2

Manufacturer: lexus | Fuel Type: gas | Number of Vehicles: 5204

Manufacturer: lexus | Fuel Type: hybrid | Number of Vehicles: 287

Manufacturer: lexus | Fuel Type: other | Number of Vehicles: 77

Manufacturer: lincoln | Fuel Type: diesel | Number of Vehicles: 3

Manufacturer: lincoln | Fuel Type: gas | Number of Vehicles: 2669

Manufacturer: lincoln | Fuel Type: hybrid | Number of Vehicles: 74

Manufacturer: lincoln | Fuel Type: other | Number of Vehicles: 86

Manufacturer: mazda | Fuel Type: diesel | Number of Vehicles: 3

Manufacturer: mazda | Fuel Type: gas | Number of Vehicles: 5192

Manufacturer: mazda | Fuel Type: other | Number of Vehicles: 67

Manufacturer: mercedes-benz | Fuel Type: diesel | Number of Vehicles: 819

Manufacturer: mercedes-benz | Fuel Type: electric | Number of Vehicles: 2

Manufacturer: mercedes-benz | Fuel Type: gas | Number of Vehicles: 8518

Manufacturer: mercedes-benz | Fuel Type: hybrid | Number of Vehicles: 15

Manufacturer: mercedes-benz | Fuel Type: other | Number of Vehicles: 141

Manufacturer: mercury | Fuel Type: diesel | Number of Vehicles: 2

Manufacturer: mercury | Fuel Type: gas | Number of Vehicles: 1270

Manufacturer: mercury | Fuel Type: hybrid | Number of Vehicles: 6

Manufacturer: mercury | Fuel Type: other | Number of Vehicles: 6

Manufacturer: mini | Fuel Type: diesel | Number of Vehicles: 2

Manufacturer: mini | Fuel Type: gas | Number of Vehicles: 1888

Manufacturer: mini | Fuel Type: hybrid | Number of Vehicles: 2

Manufacturer: mini | Fuel Type: other | Number of Vehicles: 23

Manufacturer: mitsubishi | Fuel Type: diesel | Number of Vehicles: 156

Manufacturer: mitsubishi | Fuel Type: electric | Number of Vehicles: 6

Manufacturer: mitsubishi | Fuel Type: gas | Number of Vehicles: 2166

Manufacturer: mitsubishi | Fuel Type: hybrid | Number of Vehicles: 7

Manufacturer: mitsubishi | Fuel Type: other | Number of Vehicles: 41

Manufacturer: morgan | Fuel Type: diesel | Number of Vehicles: 1

Manufacturer: morgan | Fuel Type: gas | Number of Vehicles: 3

Manufacturer: nissan | Fuel Type: diesel | Number of Vehicles: 223

Manufacturer: nissan | Fuel Type: electric | Number of Vehicles: 216

Manufacturer: nissan | Fuel Type: gas | Number of Vehicles: 22007

Manufacturer: nissan | Fuel Type: hybrid | Number of Vehicles: 37

Manufacturer: nissan | Fuel Type: other | Number of Vehicles: 515

Manufacturer: pontiac | Fuel Type: diesel | Number of Vehicles: 6

Manufacturer: pontiac | Fuel Type: gas | Number of Vehicles: 2683

Manufacturer: pontiac | Fuel Type: hybrid | Number of Vehicles: 1

Manufacturer: pontiac | Fuel Type: other | Number of Vehicles: 26

Manufacturer: porche | Fuel Type: gas | Number of Vehicles: 26

Manufacturer: porche | Fuel Type: hybrid | Number of Vehicles: 1

Manufacturer: ram | Fuel Type: diesel | Number of Vehicles: 7912

Manufacturer: ram | Fuel Type: electric | Number of Vehicles: 2

Manufacturer: ram | Fuel Type: gas | Number of Vehicles: 11771

Manufacturer: ram | Fuel Type: hybrid | Number of Vehicles: 13

Manufacturer: ram | Fuel Type: other | Number of Vehicles: 503

Manufacturer: rover | Fuel Type: diesel | Number of Vehicles: 135

Manufacturer: rover | Fuel Type: gas | Number of Vehicles: 1618

Manufacturer: rover | Fuel Type: other | Number of Vehicles: 40

Manufacturer: saturn | Fuel Type: diesel | Number of Vehicles: 2

Manufacturer: saturn | Fuel Type: gas | Number of Vehicles: 1163

Manufacturer: saturn | Fuel Type: hybrid | Number of Vehicles: 9

Manufacturer: saturn | Fuel Type: other | Number of Vehicles: 6

Manufacturer: subaru | Fuel Type: diesel | Number of Vehicles: 2

Manufacturer: subaru | Fuel Type: electric | Number of Vehicles: 1

Manufacturer: subaru | Fuel Type: gas | Number of Vehicles: 10112

Manufacturer: subaru | Fuel Type: hybrid | Number of Vehicles: 8

Manufacturer: subaru | Fuel Type: other | Number of Vehicles: 260

Manufacturer: tesla | Fuel Type: electric | Number of Vehicles: 268

Manufacturer: tesla | Fuel Type: gas | Number of Vehicles: 48

Manufacturer: tesla | Fuel Type: hybrid | Number of Vehicles: 1

Manufacturer: tesla | Fuel Type: other | Number of Vehicles: 3

Manufacturer: toyota | Fuel Type: diesel | Number of Vehicles: 52

Manufacturer: toyota | Fuel Type: electric | Number of Vehicles: 32

Manufacturer: toyota | Fuel Type: gas | Number of Vehicles: 31023

Manufacturer: toyota | Fuel Type: hybrid | Number of Vehicles: 2206

Manufacturer: toyota | Fuel Type: other | Number of Vehicles: 766

Manufacturer: volkswagen | Fuel Type: diesel | Number of Vehicles: 2103

Manufacturer: volkswagen | Fuel Type: electric | Number of Vehicles: 27

Manufacturer: volkswagen | Fuel Type: gas | Number of Vehicles: 7562

Manufacturer: volkswagen | Fuel Type: hybrid | Number of Vehicles: 8

Manufacturer: volkswagen | Fuel Type: other | Number of Vehicles: 131

Manufacturer: volvo | Fuel Type: diesel | Number of Vehicles: 216

Manufacturer: volvo | Fuel Type: gas | Number of Vehicles: 2475

Manufacturer: volvo | Fuel Type: hybrid | Number of Vehicles: 3

Manufacturer: volvo | Fuel Type: other | Number of Vehicles: 18