



My Stat Report

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STANDARD

DATA ANALYSIS

Company Name Acme S.r.l.

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Brief data description: Car Dealership Data Analysis



Document approval

The signatures below certify that the data and statistical analysis have been analyzed and verified by competent personnel in statistical analysis and according to the internal procedures of Agile Quality Support S. r. l.

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This section records the versions of the document and any updates

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This document contains examples of graphical representations and data analysis that may vary depending on the problem to be analyzed and the data provided

1 STANDARD DATA ANALYSIS

1.1 Data description

A sales manager for a car dealership wants to compare the specifications of the cars the dealership sells. The manager collects data on fuel economy, cost, safety rating and volume of cars.

1.2 Data

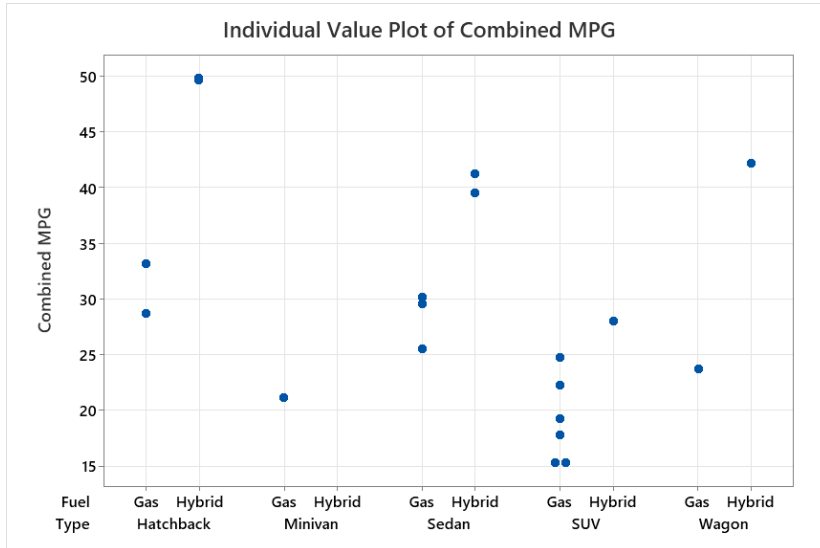
Variables	Description
<i>Vehicle</i>	The model identifier
<i>Type</i>	Volume: <i>SUV, Sedan, Hatchback, Wagon, Minivan</i>
<i>Fuel</i>	Fuel Type: <i>Gas or Hybrid</i>
<i>City MPG</i>	Fuel savings for city driving in miles per gallon
<i>Hwy MPG</i>	Fuel savings for highway driving in miles per gallon
<i>Combined MPG</i>	Overall fuel savings in miles per gallon
<i>Price (\$1000)</i>	Retail price in units of \$1000
<i>Security (0-5)</i>	Safety rating (0 to 5), where 0 is poor and 5 is excellent
<i>Inner Volume</i>	Volume of passengers in cubic feet
<i>Cargo Volume</i>	Cargo volume in cubic feet
<i>Total Volume</i>	Total volume in cubic feet
<i>Region</i>	City of purchase

The data sheet is available in the "Data Used" section.

1.3 Graphical representation of data

Representation of car, fuel types and consumption in miles per gallon.

It is immediately clear that hatchbacks with hybrid fuel have the best performance, while the worst performance is given by SUVs powered by gas



1.4 Geographical representation of data

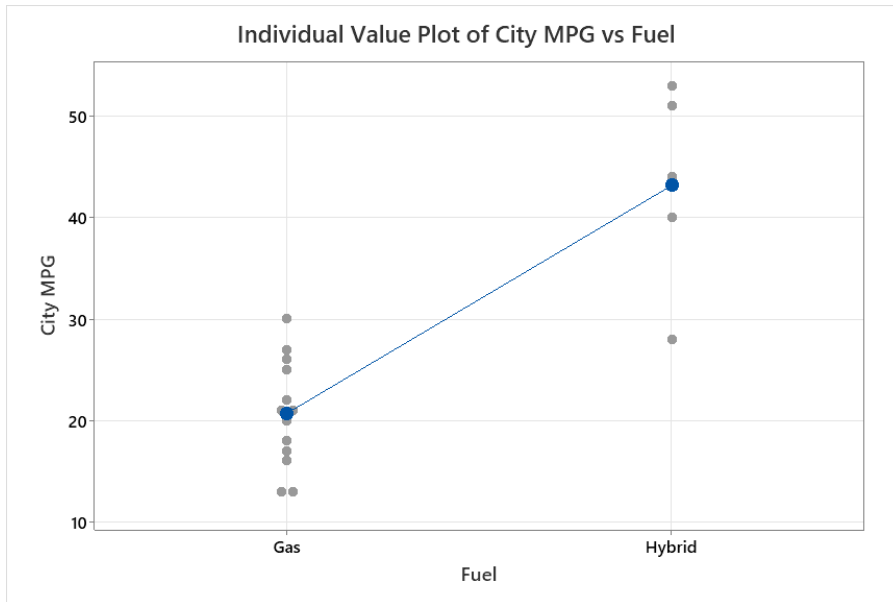
The chart below shows the distribution of sales.





1.5 Comparison between two datasets

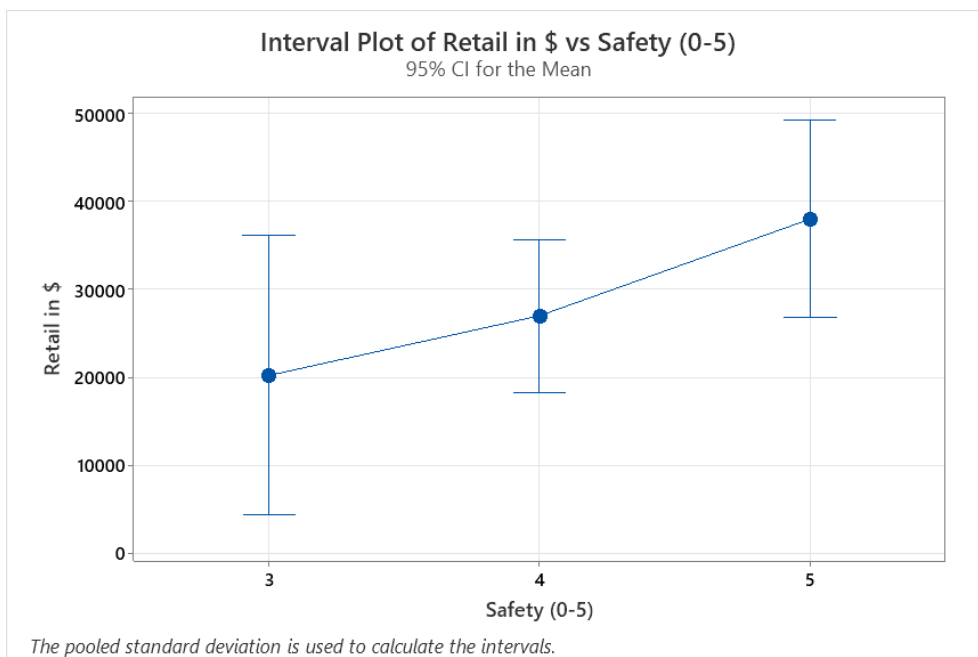
Is the difference in fuel consumption between Gas and Hybrid significant? The answer is yes (the t test was used)



1.1 Compare the difference between multiple groups

With the ANOVA test, we will answer the question: is there a statistically significant correlation between the price and safety of the vehicle purchased? Does spending more mean buying a safer vehicle?

The answer is no.





1.6 Data Used

Vehicles	Type	Fuel	City MPG	Hwy MPG	Combined MPG	Retail (\$1000)	Safety (0-5)	Interior Volume	Cargo Volume	Total Volume	Region
A	SUVs	Gas	17	22	19.25	31.3	4	97.3	89.7	187	Rome
B	Sedan	Gas	21	31	25.5	31	4	118.3	14	132.3	Naples
C	Sedan	Hybrid	40	39	39.55	35.6	5	118.3	14	132.3	Milan
D	Sedan	Gas	25	35	29.5	22.1	5	102.7	15.4	118.1	Caserta
E	Sedan	Hybrid	43	39	41.2	26	5	102.7	15.4	118.1	Novara
F	Sedan	Gas	27	34	30.15	16.2	4	92.1	12.3	104.4	Cremona
G	SUVs	Gas	16	20	17.8	26.9	3	89.1	66.8	155.9	Enna
H	SUVs	Gas	20	25	22.25	28.9	4	145.7	95.4	241.1	Pordenone
I	SUVs	Hybrid	28	28	28	40	4	145.4	94.1	239.5	Genoa
J	SUVs	Gas	13	18	15.25	78	5	151	81.7	232.7	Treviso
K	Hatchback	Gas	26	32	28.7	19.3	3	94.2	19.8	114	Treviso
L	Hatchback	Hybrid	51	48	49.65	24.2	5	93.7	21.6	115.3	Bari
M	Hatchback	Hybrid	53	46	49.85	19	4	87.4	17.1	104.5	Bari
N	Wagon	Hybrid	44	40	42.2	26.7	4	97.2	34.3	131.5	Bari
O	SUVs	Gas	22	28	24.7	22.7	4	41.8	73	114.8	Pistoia
P	SUVs	Gas	13	18	15.25	42	5	156.4	120.1	276.5	Caserta
Q	Minivan	Gas	18	25	21.15	26.4	4	164.4	150	314.4	Rome
R	Wagon	Gas	21	27	23.7	27.7	4	108	36.2	144.2	Milan
S	Hatchback	Gas	30	37	33.15	14.4	3	84.4	15.3	99.7	Cremona