Statistical Calculator

By:

Akshat Shah 19162121036
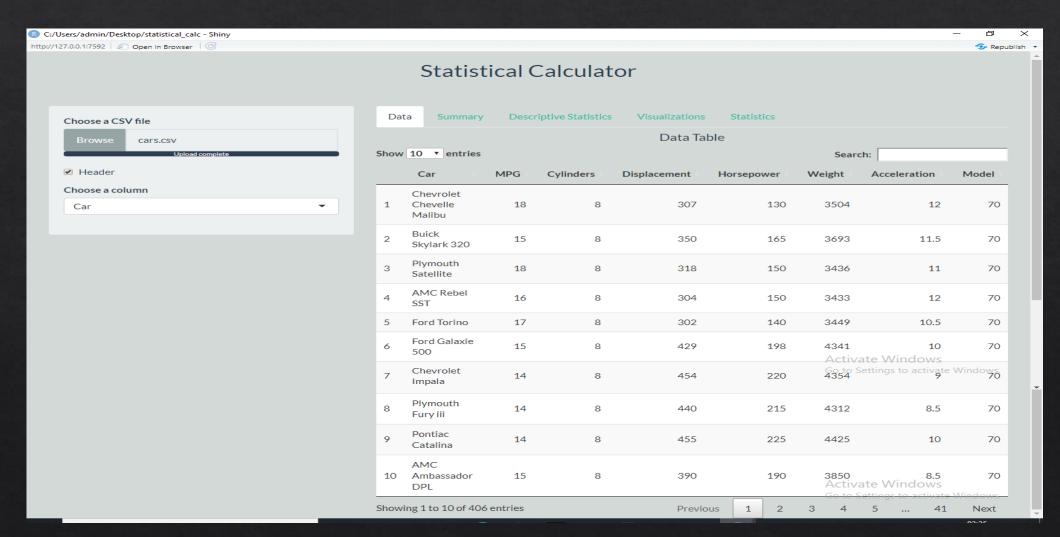
Ashil Shah 19162121037
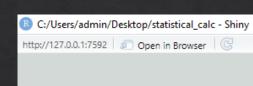
Dishwa Shah 19162121038

AIM

- Create a Shiny Web App to calculate mean, median, mode and standard deviation from the file uploaded by the user. Visualize the parameters chosen by the user from the dropdown menu. Plot a normal plot, Scatter plot, Box plot and Histogram.
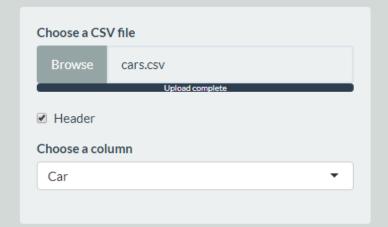
Shiny Web App

Statistical Calculator

Data   Summary   **Descriptive Statistics**   Visualizations   Statistics

Choose a CSV file

| Browse | cars.csv |

Upload complete

☑ Header

Choose a column

Car ▾

Descriptive Statistics of Data

```
Descriptive Statistics
data()
N: 406
```

	Acceleration	Cylinders	Displacement	Horsepower	Model	MPG	Weight
Mean	15.52	5.48	194.78	103.53	75.92	23.05	2979.41
Std.Dev	2.80	1.71	104.92	40.52	3.75	8.40	847.00
Min	8.00	3.00	68.00	0.00	70.00	0.00	1613.00
Q1	13.70	4.00	105.00	75.00	73.00	17.00	2226.00
Median	15.50	4.00	151.00	93.50	76.00	22.35	2822.50
Q3	17.20	8.00	302.00	129.00	79.00	29.00	3620.00
Max	24.80	8.00	455.00	230.00	82.00	46.60	5140.00
MAD	2.59	0.00	90.44	31.88	4.45	8.82	942.19
IQR	3.47	4.00	197.00	54.00	6.00	12.00	1391.75
CV	0.18	0.31	0.54	0.39	0.05	0.36	0.28
Skewness	0.23	0.50	0.69	0.74	0.02	0.09	0.50
SE.Skewness	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Kurtosis	0.34	-1.42	-0.83	0.66	-1.21	0.02	-0.84
N.Valid	406.00	406.00	406.00	406.00	406.00	406.00	406.00
Pct.Valid	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Statistical Calculator

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Choose a column

Horsepower

Histogram

Histogram of data()[, input$columns]

Frequency (y-axis)
data()[, input$columns] (x-axis)

Box plot

Scatter Plot

data()[, input$columns] (y-axis)
Index (x-axis)

QQ-Plot

Normal Q-Q Plot

Sample Quantiles (y-axis)
Theoretical Quantiles (x-axis)

Statistical Calculator

Data   Summary   Descriptive Statistics   Visualizations   **Statistics**

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Choose a column

Horsepower ▼

Mean

[1] 103.5296

Median

[1] 93.5

Mode

[1] 150

Standard deviation

[1] 40.52066

URL to visit the app

- https://dishwa.shinyapps.io/statistical_calc/

Conclusion

◈ We created an in-app calculator that displays mean, median, mode and standard deviation of the parameter selected by the user.

◈ The app also displays various plots to help understand the data of the user-uploaded file better.

THANK YOU!