

5CS462 : PE5 Data Mining Lab

PRN/ Roll No: 2019BTECS00059

Full name: Sanmati Sattur

Batch: B7

Assignment No. 1

Title: Data Analysis Tool (GUI)

Objective:

1. To Calculate and show the measures of central tendency for uploaded data : mean ,median , mode , midrange , variance and standard deviation
2. To Calculate and show the dispersion of data : range , quartiles , interquartile range, five-number summary
3. To Graphical display of above calculated statistical description of data (provide the facility - UI form to choose different attributes from uploaded data set) : a. Quantile plot b. Quantile-quantile (q-q) plot c. Histogram d. Scatter plot e. Boxplot

Introduction & Theory:

Measures of Central Tendency :

1. **Mean** : add up the values in the data set and then divide by the number of values that you added.
2. **Median** : list the values of the data set in numerical order and identify which value appears in the middle of the list. To find the mode, identify which value in the data set occurs most often.

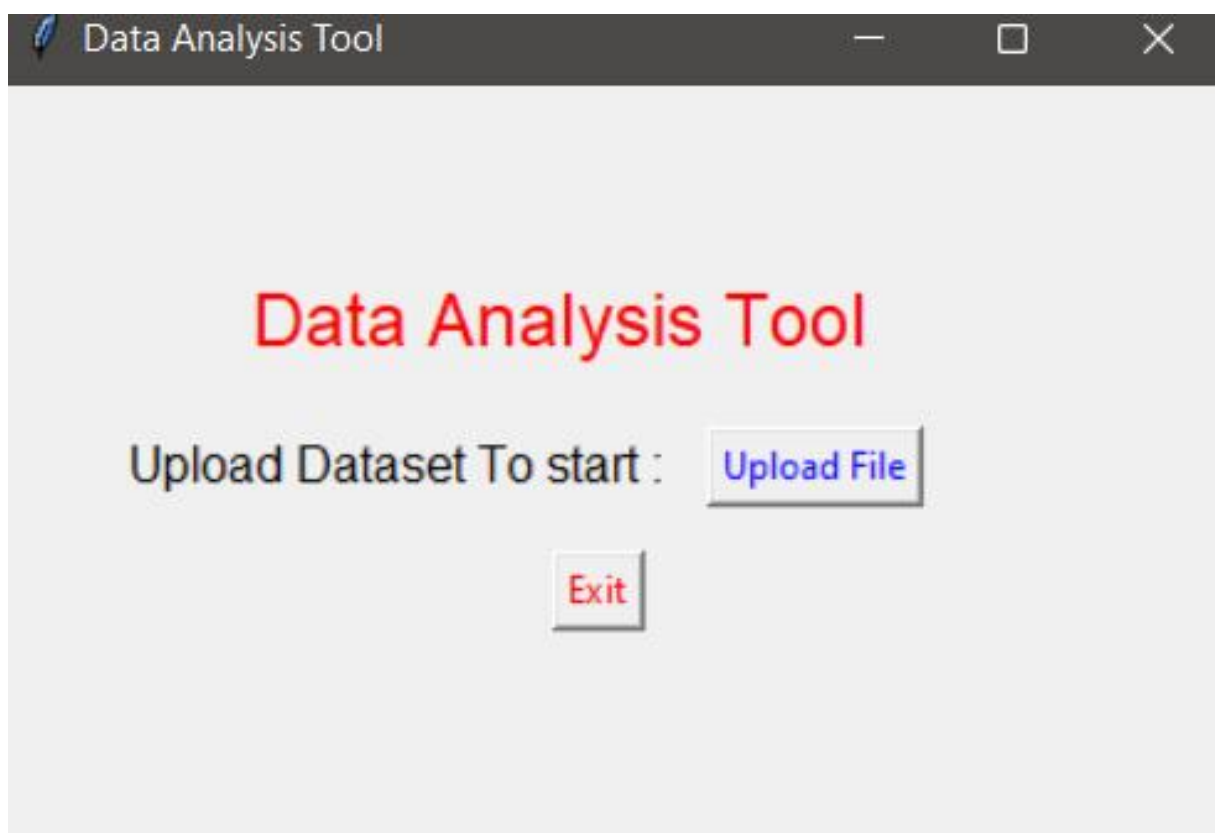
3. Mode : To identify which value in the data set occurs most often


4. Midrange : the number that is exactly halfway between the minimum and maximum numbers in a set of data.

5. Variance : It is a measure of dispersion that takes into account the spread of all data points in a data set.

6. standard deviation : It is providing a measure of variability in a sample or population.

Procedure / Experiment:



 Data Analysis Tool

Select Topic :

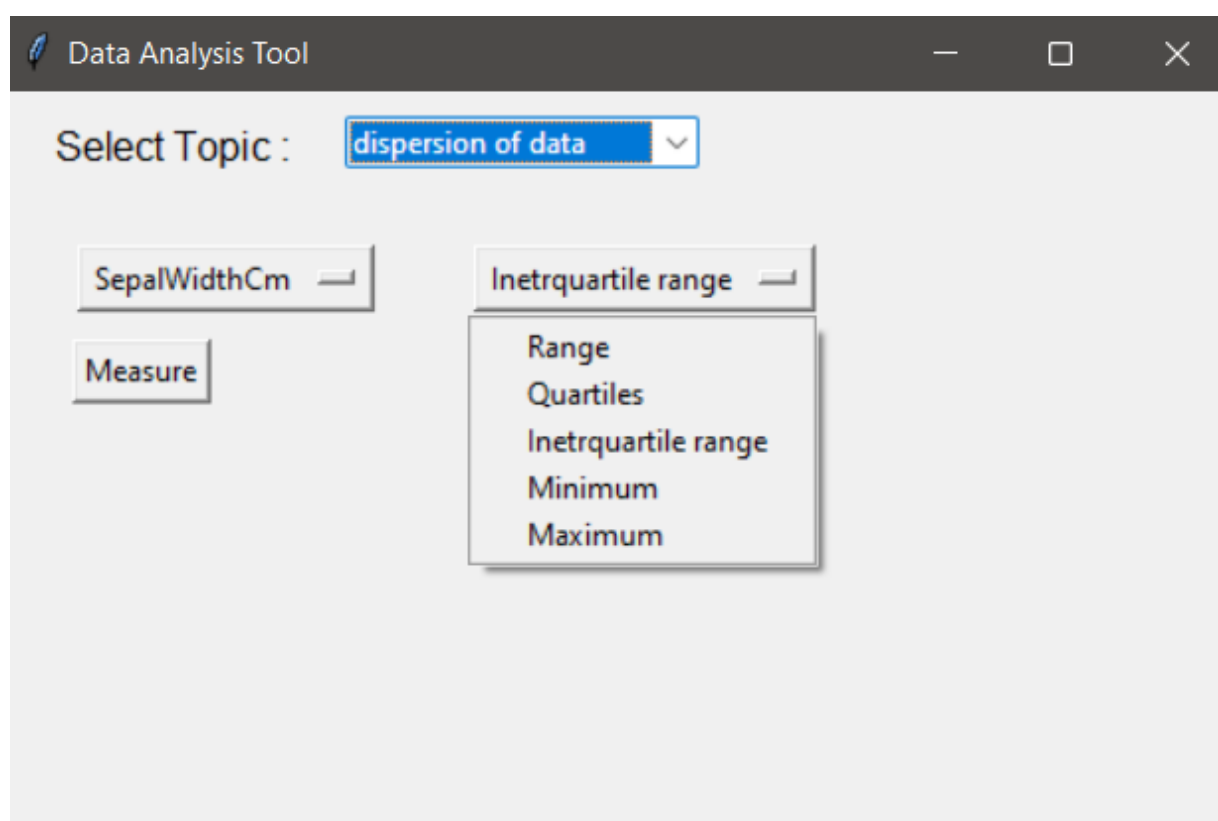
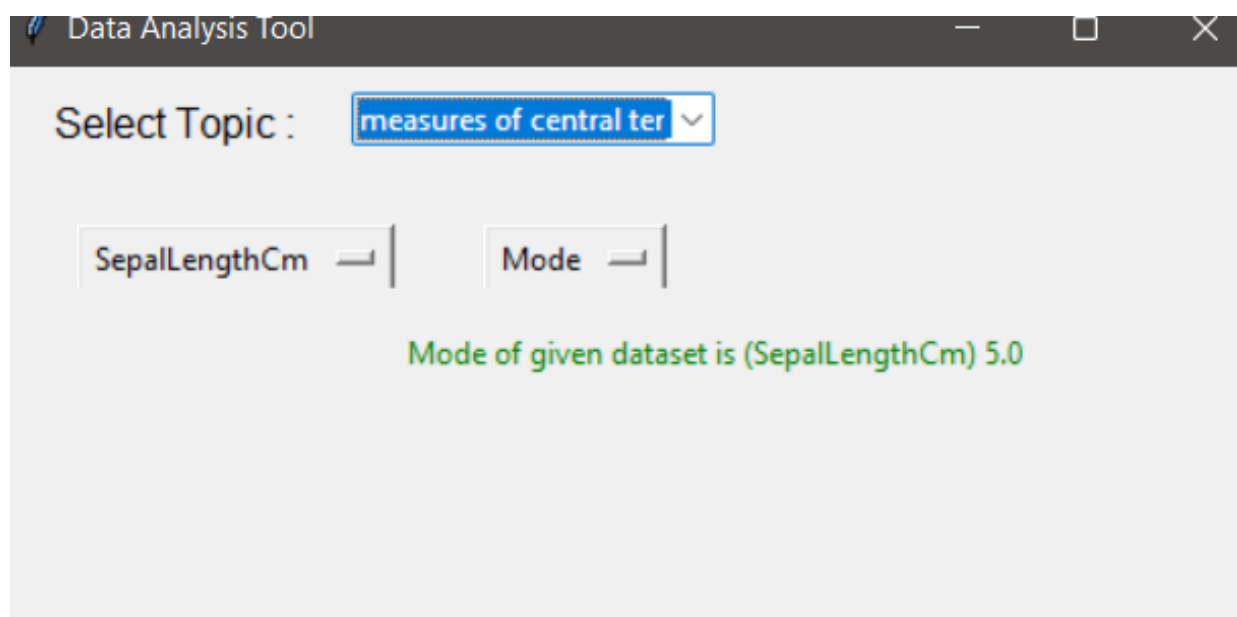
Data Display

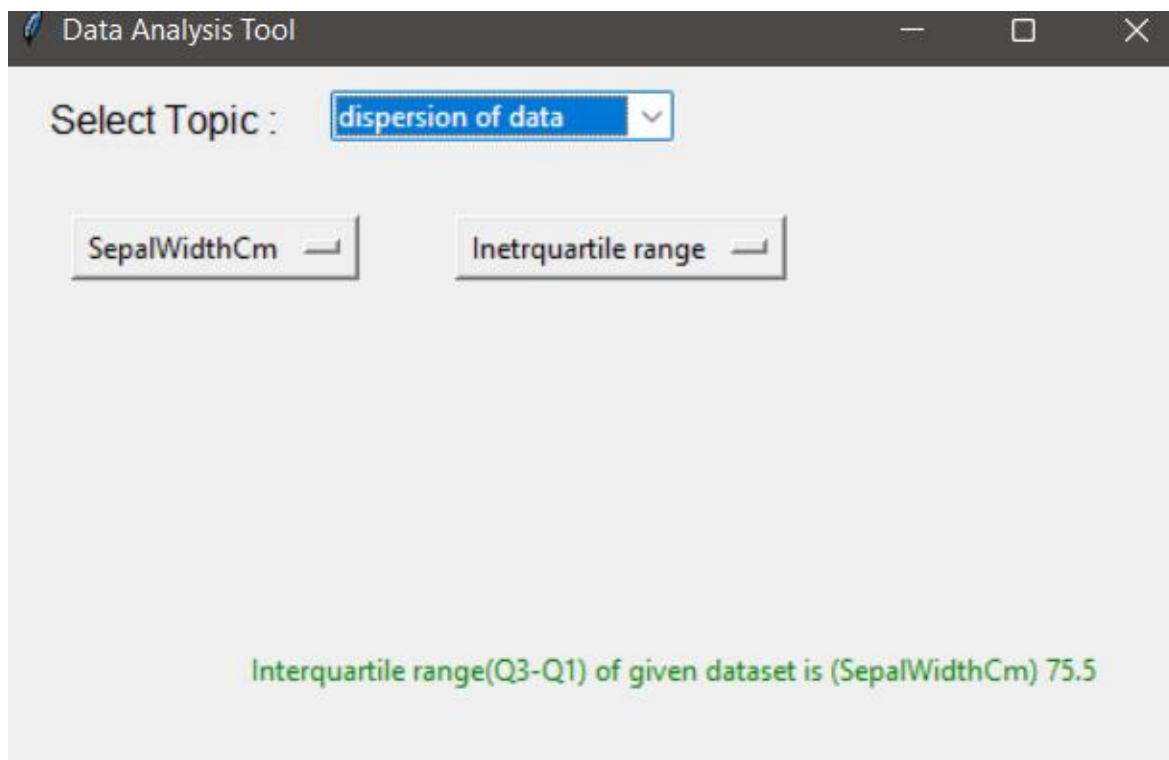
measures of central tendency

dispersion of data

statistical description

tk					
Id	sepalLengthCm	sepalWidthCm	petalLengthCm	petalWidthCm	Species
1	5.1	3.5	1.4	0.2	Iris-setosa
2	4.9	3.0	1.4	0.2	Iris-setosa
3	4.7	3.2	1.3	0.2	Iris-setosa
4	4.6	3.1	1.5	0.2	Iris-setosa
5	5.0	3.6	1.4	0.2	Iris-setosa
6	5.4	3.9	1.7	0.4	Iris-setosa





Conclusion:

Successfully Calculated and show the measures of central tendency for uploaded data : mean ,median , mode , midrange , variance and standard deviation and displayed using GUI

References:

<https://www.analyticsvidhya.com/blog/2021/04/dispersion-of-data-range-iqr-variance-standard-deviation/>

Dataset:

<https://archive.ics.uci.edu/ml/datasets/Iris>