InClassAssignment1(Group of two)
CS160-02
Introduction to Data Science
Spring 2023

<div align="center">Working on Techniques for Analyzing Data</div>

Instructions: Complete the following activities for this project.

1. Create a new GitHub repository named Assignment1_XXX, where XXX are your initials.
2. Using excel (to generate the result) and word documents (type answers and paste the results) work on the following questions and submit your work using **pdf** format.

   a. What are the differences between data analysis and data analytics?

      Data analytics is a broad term for the concepts and practice of everything you can do with data. Data analysis is a small part of data analytics.

   b. Comment on variable types of Murder, Assault, and urban pop.

      Independent, continuous, ratio

   c. What is the difference between interval and ratio data?

      Interval data has numbers with equal spacing between adjacent values without an absolute zero. Ratio data is when numbers have units of equal magnitude and rank order on a scale with an absolute zero.

   d. What is descriptive analysis? Represent the data of Murder, Assault, and urban pop. Comment on the distribution.

      The first kind of data analysis performed on a data set.

   e. What is a measure of dispersion? Calculate the interquartile range of those three variables

	Murder	Assault	UrbanPop
IQR	7.175	140	24.5
Variance	18.591056	16443.75	5281
SD	4.31173469	128.2332	72.67049

f. What is the measure of centrality? Find the measurement of centrality:

	Murder	Assault	UrbanPop	mean, median, mode
Mean	7.788	182.1836	74.2	
Median	7.25	159	66	
Mode	13.2	120	80	

g. What are diagnostic analytics? Find diagnostic analysis for pair of variables.

Correlation of Murder and Assault 0.6493759

Correlation of Assault and UrbanPop -0.1406631

Correlation of Murder and UrbanPop -0.1861696

3. Using the instructions provided by GitHub, create a git repository named DS160**InClassAssignment**, and push your pdf file to it. Each of you needs to submit your work.

Submission:

Paste a link to your GitHub repository in the area provided for this assignment and submit it by class time.