

Two parts discussions

by Name Name

Submission date: 16-Feb-2021 12:34AM (UTC+0800)

Submission ID: 1510077913

File name: Two_part_discussion_questions.docx (23.23K)

Word count: 797

Character count: 4190

Two parts discussion Questions

Name

Institution

Two parts discussion Questions

Part 1

Write a response to the following questions in a minimum of 500 words. Your readings in this module will inform your answers.

- **How is data analytics different from statistics?**

Data analytics and statistics are two terms that can be very contradicting. Data analytics is a type of science that involves the use of raw data, perform analysis and produce information that can be useful to people. In other words, it applies raw data to generate meaningful ideologies about phenomena. On the other hand, statistics starts with the act of collecting samples from a population, analyzing the samples, and give generalized characteristics about the entire population. Data analysis methods are used in statistics making them interrelate with each other. For example, formulation of the hypothesis is a method in data analytics while proving the hypothesis as true or false requires statistical techniques.

- **Analytics tools fall into three categories: descriptive, predictive, and prescriptive. What are the main differences among these categories?**

Analysts can least perform their functions without the help of analytics tools. These are tools that drive the process of making references and conclusions regarding a given set of data. These tools are classified into three; descriptive analytics, predictive analytics, and prescriptive analytics. Descriptive analytics is concerned about the historical data, therefore, giving a good understanding of what has already taken place. It is mostly used in a business environment to single out what has happened in the business according to the provided data.

Analysts refer to predictive analytics as a more advanced type of analytics that applies techniques such a modeling and artificial intelligence to make predictions of what

might happen in the future according to the data provided. It answers the question of what could happen. The other type of analytics is mostly done with the help of computer programs, and it answers the question of what exactly should be happening. This type of analytics aids businesses in knowing what actions to take to achieve what is expected of them.

- **Explain how businesses use analytics to convert raw operational data into actionable information. Provide at least one example.**

Businesses convert data into actionable information through what is commonly known as business intelligence. They start with gathering data from multiple sources and analyzing it to get the real implication of the businesses' performance. Through the three analytical tools, the data available can communicate to the business about what has happened, what is about to happen, and what should happen. Through this, the firms can act accordingly and this is actionable information.

An example of how firms convert raw operational data into actionable information is a company that has noticed a decline in aggregate sales. It performs data collections and analysis and finds there individuals with questionable performance, the action is taken by the firm regarding the findings from the data. A firm that uses raw operational data and analyzes it to come up with the necessary actions performs better.

- **Consider the organization you work for (or any other organization you're familiar with). Is data analytics used by this organization? If so, how is it used? If not, how could data analytics be used to improve the organization's performance?**

In the organization that I work for, data analytics is widely used. In case there are any inconveniences in the organization such as underperformance, the organization performs the process of data collection through questionnaires, and actions are taken

regarding that by the management. Of course, this is after data analysis. Apart from the incidences of inconveniences, questionnaires are always all around the organization to collect information that would lead to improvement of the services offered.

Part 2

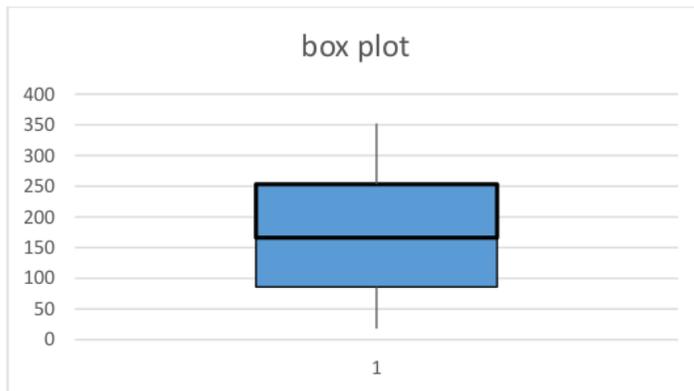
The most frequently used measures of central tendency for quantitative data are the mean and the median. The following table shows civil service examination scores from 24 applicants to law enforcement jobs:

83	74	85	79
82	67	78	70
18	93	64	27
93	98	82	78
68	82	83	99
96	62	93	58

Use Excel to find the mean, standard deviation, and 5-number summary of this sample.

5-number summary	
minimum	18
First quartile	67.75
Median	80.5
Third quartile	87
maximum	99

- **Construct and paste a box-plot depicting the 5-number summary.**



- **Does the dataset have outliers? If so, which one(s)?**

Yes the data has outliers

The range provides for the values between 38.9 and 115.9 and therefore 18 and 27 are outliers.

- **Would you prefer to use the mean or the median as this dataset's measure of central tendency? Why?**

I would prefer to use the median because it is not much affected by the outliers as

compared to the mean. In this case, the data is skewed and the best measure of central tendency is the median.