

Comp 162 Classwork 1

Pranav Jayakumar

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Question 1

What do you think Data Analytics means?

Solution

Data Analytics means using computer programs and mathematical models to extract useful insights about data.

Question 2

Which is the data analyst and which is the data scientist in the following scenario?

- Job 1: Determine which categories of games are popular among each demographic
- Job 2: Develop a model to predict which games that are about to be release will be the most successful

Solution

In the first scenario, the person performs the job of a **data analyst**. This is because the person is only answering a specific question about the data.

In the second scenario, the person performs the job of a **data scientist**. This is because the person is using the data collected to make a prediction.

Question 3

Where else do you see analytics in your own life? What personal data analytics do you have access to?

Solution

We see data analytics in virtually everything around us. Some key examples include Spotify wrapped, a personal health app, banking information, and many more.

Question 4

What are the variables in the "Welcome Survey" data? What are the observations?
The variables of the "Welcome Survey" data are as follows:

- Year
- Excitement
- Height
- Season
- Introvert vs. Extrovert
- Handedness
- Sibling
- Bedtime
- Caffeine
- Tennis Ball Color
- Dress Color

Solution

We observe that students who began college in 2024 and those who began in 2021 exhibit the highest levels of excitement. We also observe that the median height of the students in the survey is 67.5 inches. Finally, we observe that the class is mostly introverted, with there being 30 introverts and 4 extroverts out of the 34 students.

Question 5

Classify all of the in the "Welcome Survey" data into the following categories:

1. Binary (categorical variable with two choices)
2. Nominal (categorical variable with more than two choices)

3. Ordinal (categorical variable with intrinsic ordering)
4. Continuous (quantitative variable that can take an infinite number of values)
5. Discrete (quantitative variable that can only take a fixed number of values)

Solution

The classification of each variable is as follows:

1. Binary
 - Introvert vs Extrovert
 - Tennis Ball Color
2. Nominal
 - Season
 - Handedness
 - Dress Color
3. Ordinal
 - Excitement
4. Continuous
 - Height
 - Bedtime
 - Caffeine
5. Discrete
 - Year
 - Sibling

Question 6

What question do you have about the "Welcome Survey" data that can be answered using a 1-way or 2-way frequency table?

Solution

We can answer the question "How many individuals perceive the dress as being blue and black versus being white and gold?" using a 1-way frequency table.