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Introduction to Data Science

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Task #2

1/ Normal distribution of data distribution.

It is also known as Gaussian distribution. It is symmetric and characterized by its mean and standard deviation. It's shape is "bell curve".

Example :-

Height of individual :-

If we measure heights of a large group of people, their heights will be approximately normal distribution with the mean and standard deviation represents variation of heights.

2/ Skewed distribution.

It is probability distribution that is A-Symmetric. It occurs when one tail is longer than

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The other. It is A-symmetric of distribution. Unlike the familiar distribution with its bell curve.

Example :-

Exam score :-

If exam is challenging, the majority of the students may score relatively low resulting in a peak on right side of distribution.

while few students may score relatively high creating a long Tail of left side.

3/ Uniform distribution

It is also known as rectangular distribution. It is probability distribution where all outcomes or values are equal within a given range.

Example :-

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Rolling a die :-
If we roll a six-sided die, the outcomes are likely equal. because its probability of rolling any specific number is 1/6.

4/ Bimodal distribution
It is distribution in which outcome of two processes are shown together in ~~one~~ two datasets with different distribution. It is also known a double-peaked distribution.

Example :-
People visiting restaurant :-
It's example is about No. of customers who visit restaurant in each hour. People tends to eat during two distinct time; lunch and dinner. Their data is shown in ~~one~~ two datasets. It is example of bimodal distribution.

5/ Multimodal distribution:-

It is distribution in which data is characterized by multiple groups or clusters with each group is having highest frequency. It occurs when we collect data for multiple groups.

Example:-

Height of plant species:-

If a ~~data~~ scientist measures the height of three different plant species located in same field, the distribution of all plants will be multimodal when placed on same histogram.

6/ Exponential distribution:-

The exponential distribution is often concerned with the amount of time until some specific event occurs. It is called exponential distribution.

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Example :-

Phone calls Time :-

If you work at custome service center and recieve calls from customers. The Time can be modeled of Phone calls using exponential distribution.