Data Analyst Interview Questions

Statistics Edition

- What is the difference between Descriptive and Inferential Statistics?
- What is the difference between a sample and a population?
- What is the sampling method? List the different types of sampling methods:
- What is A/B testing?

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1. What is the difference between Descriptive and Inferential Statistics?

Descriptive Statistics: Descriptive stats summarize and describe data using numbers and graphics to provide an overview.

Inferential Statistics: Inferential stats draw conclusions or predictions about a population based on a sample and involve hypothesis testing and estimating confidence intervals.

1. What is the difference between a sample and a population?

Population: The population is the entire group or set of items or individuals that a researcher wants to study and make conclusions about. It includes every possible element of interest.

For example, if you're studying the average income of all households in a country, the entire set of households in that country would be the population.

Sample: A sample is a subset or a smaller, manageable group taken from the population. It is selected in such a way that it is representative of the larger population.

Sampling is done to reduce the cost and effort of studying an entire population and to make inferences about the population based on the characteristics of the sample.

2. What is the sampling method? List the different types of sampling methods:

Sampling is the process of selecting a subset of data from a larger population to draw conclusions or make inferences about the entire population. There are several types of sampling methods, including:

Simple Random Sampling: Every item in the population has an equal chance of being selected.

Stratified Sampling: The population is divided into subgroups or strata, and random samples are taken from each stratum.

Systematic Sampling: A fixed interval is used to select samples from a list, often starting with a random item.

- **Cluster Sampling:** The population is divided into clusters, and a random sample of clusters is selected, followed by sampling within the selected clusters.

- **Convenience Sampling:** Samples are chosen based on what is convenient or readily available, rather than using a random or systematic method.

3. What is A/B testing?

- A/B testing, also known as split testing, is a method used to compare two versions of a webpage, app, or marketing content to determine which one performs better.

- It involves dividing a group of users into two (or more) groups and showing each group a different version (A and B) to measure their response.

- Typically, A is the current version, and B is the new or modified version. The goal is to determine which version leads to better user engagement, conversion rates, or other desired outcomes.

- *A/B testing helps organizations make data-driven decisions and optimize their offerings.*

Thanks for reading!

Good Luck for your Interview.

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