

Sampling and Sampling Methods

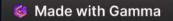
In this presentation, we will explore the purpose and importance of sampling in research. We'll also dive into various types of sampling methods, their advantages, disadvantages, and considerations for choosing the right method.



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Introduction

Sampling is a vital process in research that allows us to make inferences about a population based on a subset of data. It saves time, resources, and provides practical insights.



Types of Sampling Methods

Simple Random Sampling

A basic sampling method where every individual in the population has an equal chance of being selected for the sample.

Stratified Random Sampling

Divides the population into distinct groups or strata, then randomly selects individuals from each stratum, ensuring representation from all groups.

Systematic Sampling

Selects every nth individual from the population after a random starting point, offering a balance between simplicity and randomness.

Cluster Sampling

Divides the population into clusters, randomly selects a few clusters, and includes all individuals within the selected clusters in the sample.

Advantages and Disadvantages

Simple Random Sampling

+ Easy to use and understand

- Potential for underrepresentation or overrepresentation

3 Systematic Sampling

+ Provides a representative sample

- Vulnerable to periodic patterns and selection bias

Stratified Random Sampling

+ Ensures representation from each stratum

- Requires prior knowledge of population characteristics

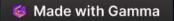
4 Cluster Sampling

+ Efficient for large and geographically dispersed populations

- Potential for within-cluster homogeneity

Considerations for Choosing a Sampling Method

- Population size and characteristics
- Time, budget, and resources available
- Research objectives and questions
- Data analysis techniques
- Feasibility and practicality



Conclusion

Key Takeaways

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- Understand the purpose and importance of sampling
- Differentiate between sampling methods
- Evaluate advantages and disadvantages
- Consider factors when choosing a sampling method

