SNS COLLEGE OF TECHNOLOGY

An Autonomous Institution
Coimbatore-35

DEPARTMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE

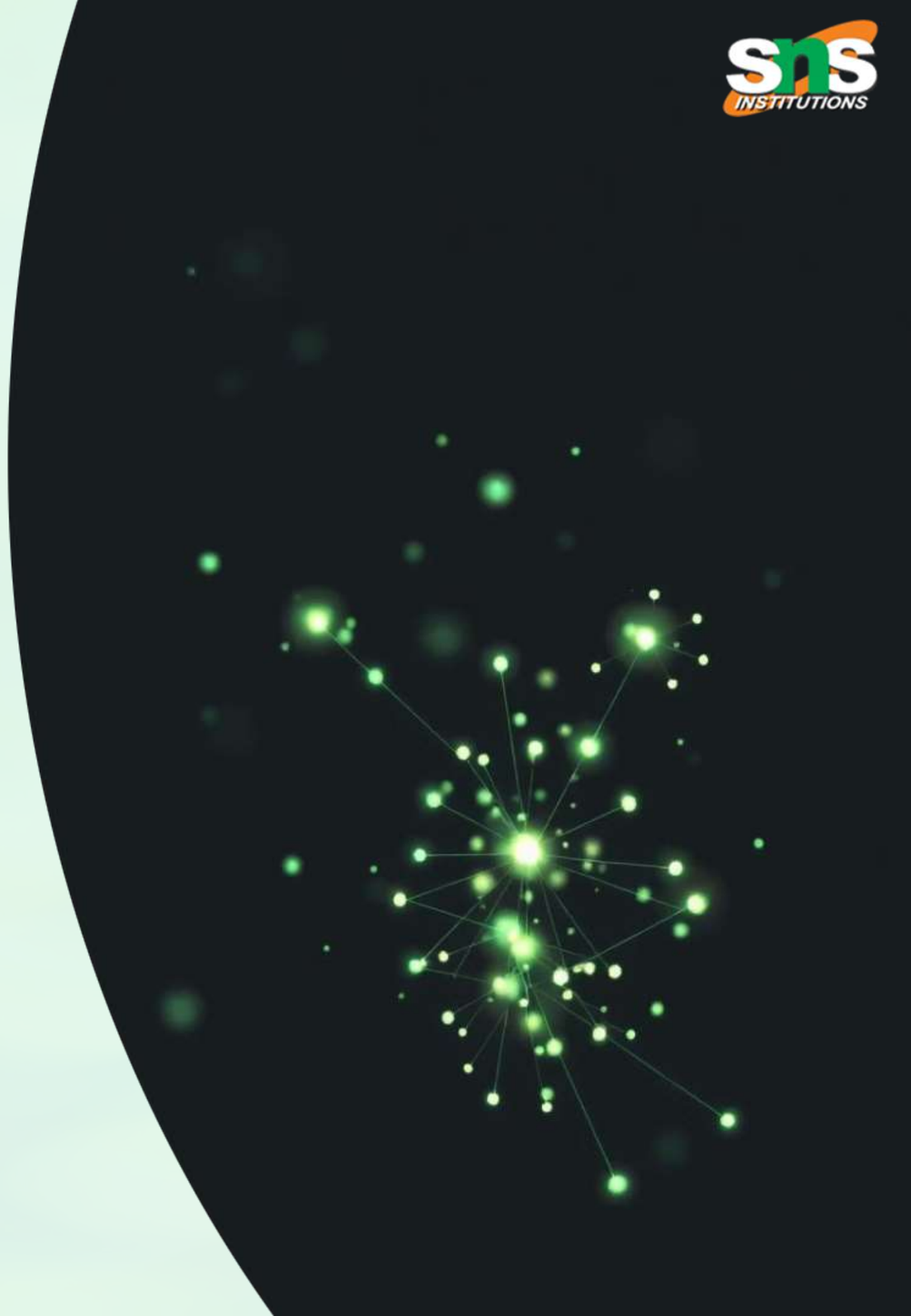
23ADT202 – FUNDAMENTALS OF DATA SCIENCE AND ANALYTICS

II YEAR IV SEM

UNIT III – Estimation – Point Estimate

Estimation – Point Estimate

Course: Statistics for Engineers
Focus: Parameter Estimation
Instructor:



Empathize

- Applications:
- - Network latency
- - System performance
- - Manufacturing quality
- Need estimation from samples

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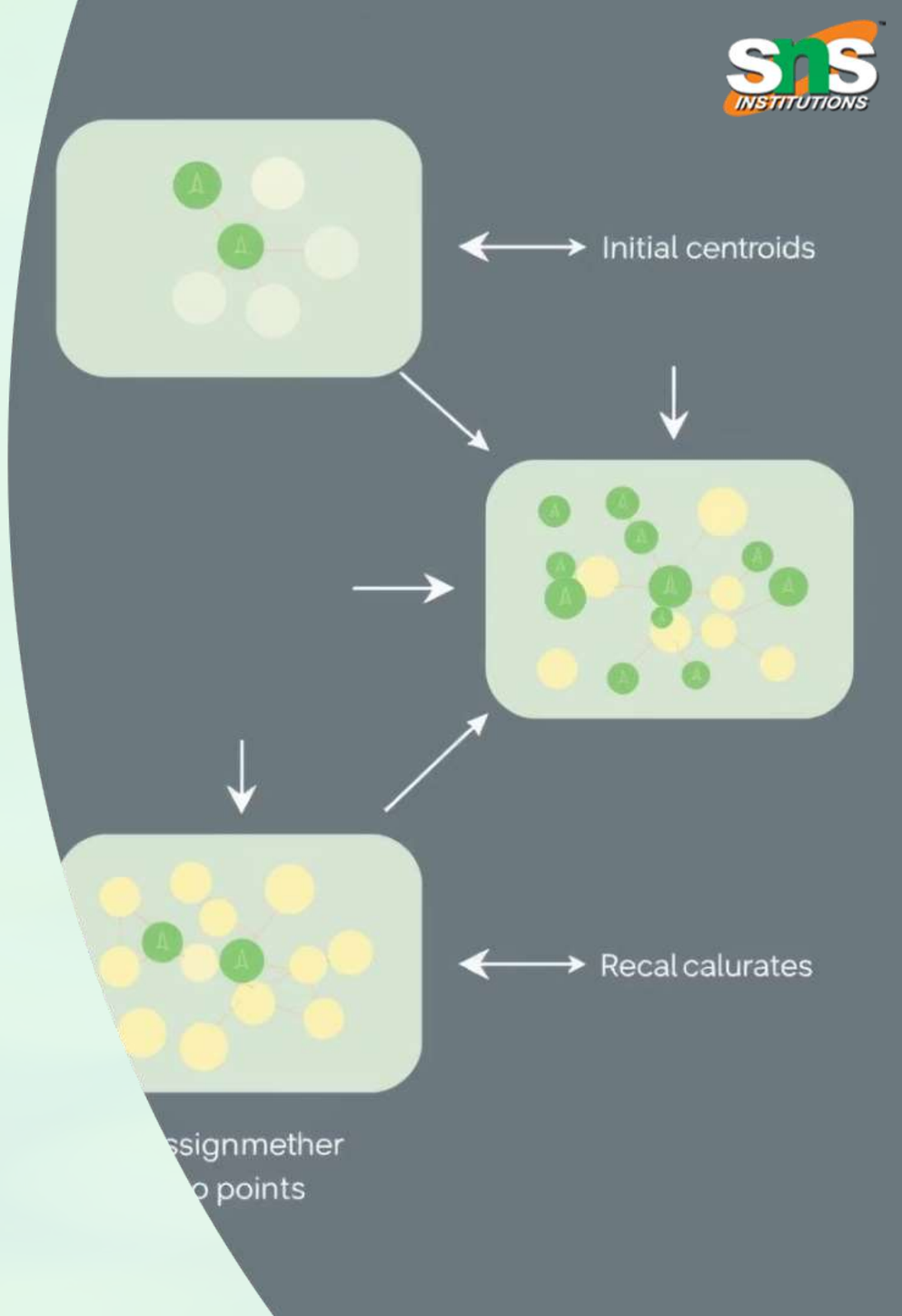
Define Problem

- How to estimate population parameters using sample data?
- Challenges: limited data, errors

Ideate:

- Approaches:
- - Sample mean
- - Sample proportion
- - Sample variance



Point Estimate:

- Single value estimate of population parameter

Mean Estimation

- Estimated mean = Sample mean

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Proportion Estimation

- $\hat{p} = x/n$

Good Estimator

- Unbiased
- Consistent
- Efficient

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Evaluation:

- Simple but lacks uncertainty

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Summary

- Use sample stats as estimates

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