

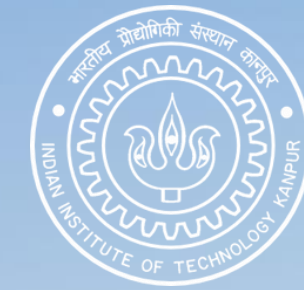
Week-06-L-06

# ICT & Digital Applications

## Summarizing the Course

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# Week-01

- How statistics is utilized plays a vital role in agriculture. ✓
- Why should we be using it in agriculture & how should we use it? ✓
- How to select and use statistical variables as well as the basic terminologies associated with the same.
- ✓ Examples & covered mean, median and mode.
- Finally application of statistics in the diverse field of agriculture.



Week-01

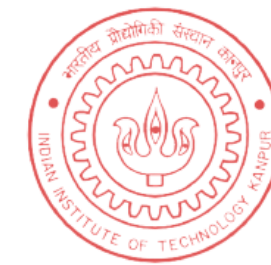
## Use of Statistics in Agriculture

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# Week-02



- Various techniques used for sampling.
- Different types of sampling like the cluster sampling, multistage sampling, random sampling & so on.
- Advantages & disadvantages of all of them & also understood how to choose which one should we choose for our exercise.
- Errors being an integral part of any analysis we covered both sampling and non-sampling errors.



# Week-03



- What is hypothesis, how are they used in the statistics & their different types?
- Tests & level of significance, normal distribution, it's characteristics were discussed with an elaborate example.
- Series of examples over the different types of tests like the Z-test, T-test, & F-test.
- ✓ Different types of alternative hypothesis.

The slide cover features a green vertical bar on the left with the text 'Week-03' and 'Hypothesis Testing' in white. The background is a scenic landscape of rolling green hills and yellow fields under a blue sky. The IIT Kanpur logos are in the top right corner. At the bottom, the text reads: 'Dr. Amandeep Singh, Department of ME &amp; Design, Indian Institute of Technology Kanpur'. A red checkmark is next to the title 'Hypothesis Testing'.

# Week-04



- Planning & designing of experiment, the associated terms & also about the types of DoE.
- Size and shape of design & statistical modelling. Advantages that it offers over, Mathematical modelling & machine learning.
- Probability distributions, regression models and interpreting given data through these means. Examples on classification & regression.

Week-04

## Select a Statistical Model

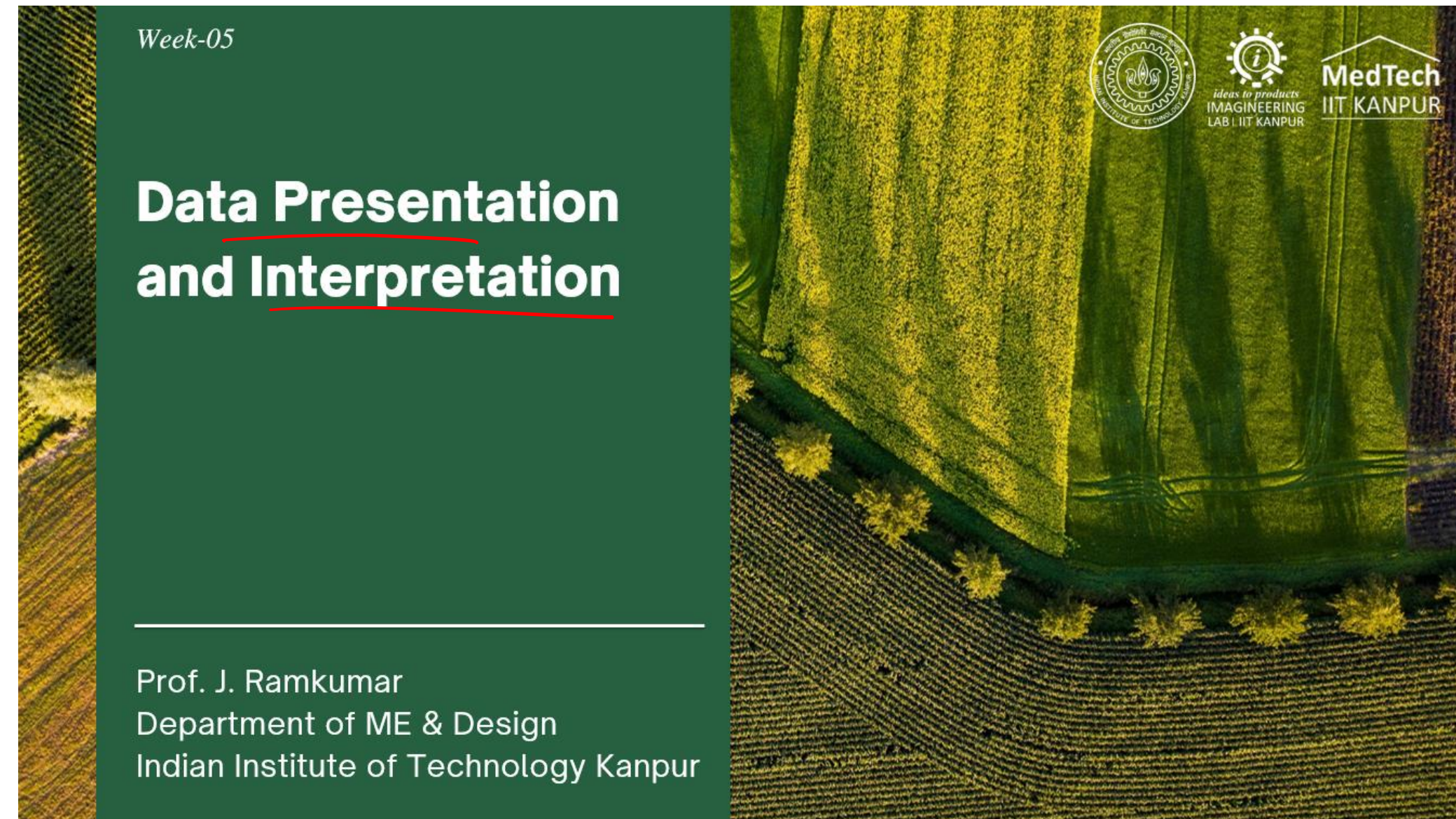
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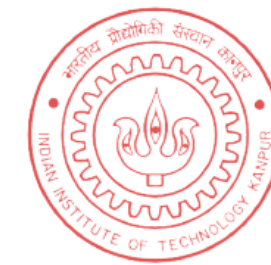
The logo of the Indian Institute of Technology Kanpur, featuring a circular emblem with a lamp and gear, surrounded by the text 'INDIAN INSTITUTE OF TECHNOLOGY KANPUR' and 'भारतीय प्रौद्योगिकी संस्थान कानपुर'.

# Week-05

- How to summarize data, central tendencies, Choosing right table and graph.
- Important part of data i.e. observations their type & ways of collection.
- Good data Tracking Process.
- While plotting data, the different terminologies like errors of misleading scales, computer fits, guiding experimentation & transformation of variables were discussed as well.



# Week-06



- Digital tools help us improve our efficiency, & also increase the credibility of our results & analysis as they reduce the degree of errors when compared to analysis done manually.
- Discussed about different tools developed so far which are catering to the need of the of farmers & researchers to improve their data analysis.
- Exercises on how to use these systems & why is it necessary.

A presentation slide for Week-06. The slide has a dark green background on the left and a light blue background on the right. The left side contains the text 'Week-06' and 'ICT & Digital Applications' in white. The right side features a landscape image of a green field at sunset. Logos for IIT Kanpur, Imagineering Lab, and MedTech are visible in the top right corner of the slide.

Week-06

## ICT & Digital Applications

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***“Statistics is the new  
seed for having  
maximum yield”***

**All the best!**

**Thank You**

