## **Data Analysis & Visualization Using R**



Beginner Level Online Course for Undergraduate & MS Students

Welcome to the beginner level online course on **Data Analysis & Visualization Using R**. This course is designed for students who aim to develop foundational skills in statistical analysis and data visualization using R. Each class will be structured to balance theoretical knowledge with practical applications, ensuring a comprehensive learning experience. The suggested reading materials for each session will enhance your understanding and reinforce the concepts covered in the lectures.

## Class 3 Outlines

- 1. Analysis of Variance
  - ➤ Completely Randomized Design
  - ➤ Randomized Complete Block Design
    - ♦ 1 Factor
    - 2 Factor
- 2. Post-hoc Testing & Lettering
- 3. Preparation of Boxplot, Violin Plot, Bar Diagram

## **Reading Materials**

- 1. ANOVA
- 2. Experimental Design
- 3. Post-hoc Test

To ensure active participation and continuous learning, **unannounced quizzes** may be conducted before or after each class, covering the topics discussed in lectures and suggested readings. **Your quiz scores will contribute to your final evaluation and will be reflected in your course certificate. Attendance in all classes and participation in quizzes are mandatory to receive the certificate.** We encourage you to stay engaged and make the most of this learning opportunity.