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 1 Outlines

1. **Theory**
   - ☐ Descriptive Statistics
     - Mean, Median, Mode
     - Standard Deviation
     - Standard Error of Mean
     - Skewness
     - Kurtosis
     - Normality of Data
     - Outlier in a dataset
   - ☐ Histogram, Bar plot, Boxplot, Violin Plot
2. **Code of Conducts**
3. **Installation of R, RStudio, Rtools**

Reading Materials

1. **Descriptive Statistics**
2. **Interpret Bar plots**
3. **Interpret Boxplots**
4. **Interpret Violin plots**

Download Links:

- ➢ **R**
- ➢ **RStudio**
- ➢ **RTools**

*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.*

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Course Instructor

Portfolio | **LinkedIn** | **Twitter (X)** | **ResearchGate** | **Google Scholar** | **ORCiD** | **Medium** | **GitHub**