

Day 12

Topic Covered: Data View Manipulation and Advanced Visualization in R using tidyverse, reshape2, and ggplot2

Summary:

Today's session focused on reshaping datasets and creating advanced visualizations in R. We first learned how to convert data between wide and long formats using functions from tidyverse and reshape2. Reshaping data is important for organizing information in a format suitable for analysis and plotting.

The session then covered advanced visualization techniques using ggplot2, including box plots, scatter plots, density plots, and line plots. These visualizations help understand data distributions, relationships between variables, and overall patterns.

New Concepts Learned:

- `pivot_longer()` and `pivot_wider()` for reshaping data
- Creating box plots, scatter plots, density plots, and line plots using ggplot2
- Customizing plot aesthetics such as colors, labels, and themes

Activity:

- Reshaped datasets into long and wide formats using tidyverse and reshape2
- Created multiple types of visualizations using ggplot2
- Compared different plots to understand how each represents data

Challenges Faced:

- Deciding which plot type was most suitable for the given data
- Understanding ggplot2 syntax and the use of layers
- Adjusting plot aesthetics to make the visualizations clear and meaningful

Key Takeaway:

Learning data reshaping and visualization techniques is essential for effective data analysis. These skills help present insights clearly and make analytical results easier to understand.