Day 06

Topic Covered: R-Charts in R

Summary:

Today's session focused on data visualization in R, mainly using graphs and pie charts. Visualization is an important part of data analytics because it helps represent complex datasets in a clear and understandable manner. We learned how graphs can be used to show relationships and patterns, such as trends or correlations, through scatter plots and line plots.
Pie charts were introduced as a way to display categorical data distribution and compare proportions visually. Both types of charts play a key role in presenting analytical results effectively.

New Concepts Learned:

1. **Graphs**
   Graphs are used to visualize relationships between numerical variables.
   Key functions learned:

- plot(x, y): Basic plotting function
- plot(x, y, xlab=, ylab=): Add axis labels
- plot(x, y, main=): Add a title
- plot(x, y, col=): Change color of points or lines
- plot(x, y, cex=): Change point size
- plot(x, y, pch=): Change point shape
- plot(x, y, type="l"): Draw line plots
- plot(x, y, lwd=): Change line width
- lines(): Add additional lines to a graph
- points(): Add more points on an existing graph

These features help analyze numerical data visually and understand patterns more clearly.

2. **Pie Chart**

   A pie chart is used to show how different categories contribute to a whole.

   Key functions learned:

- pie(x): Create a basic pie chart
- pie(x, init.angle=): Change starting angle of the chart
- pie(x, radius=): Adjust pie size
- pie(x, main=): Add a title
- legend(): Add a legend to describe categories

Pie charts help in comparing categories and understanding the proportion of each segment.

Activity:

- Created scatter plots and line graphs using the plot() and lines() functions
- Customized graphs using labels, colors, titles, and legends
- Prepared pie charts to represent categorical data
- Experimented with different parameter settings like pch, lwd, and cex

Challenges Faced:

Managing different customization options in graphs was initially confusing. Combining multiple points and lines on the same graph also required careful understanding of how functions like lines() and points() work together.

Key Takeaway:

Graphs and pie charts are essential tools for data visualization in R. They make it easier to explore datasets, identify patterns, and communicate results effectively. Learning how to create and customize these charts is important for clear and meaningful data analysis.