



# **SNS COLLEGE OF ENGINEERING**

**Kurumbapalayam (Po), Coimbatore – 641 107**

**An Autonomous Institution**

**Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A’ Grade**

**Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai**



## **DEPARTMENT OF MANAGEMENT STUDIES**

**COURSE NAME : 23BAP106– FUNDAMENTALS OF DATA ANALYSIS**

**I YEAR /I SEMESTER**

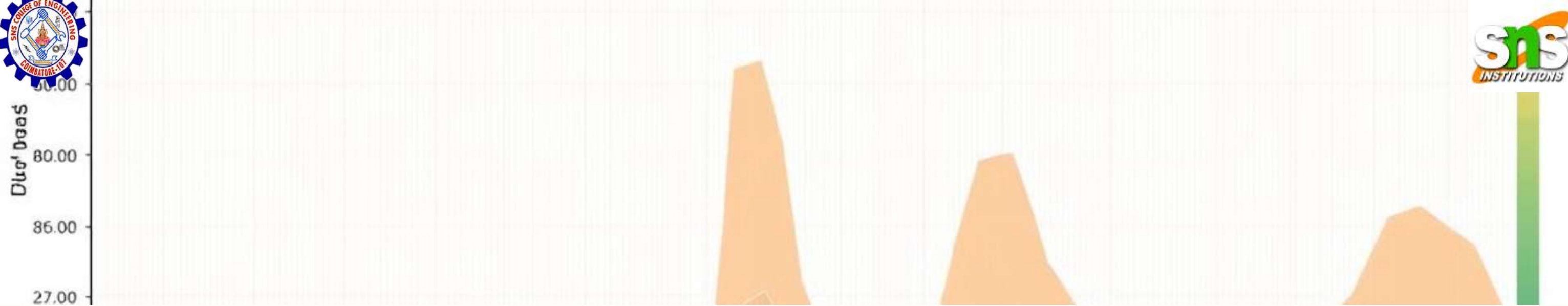
**Unit I – EXPLORING DATA ANALYTICS**

**Topic 2: CREATING APPROPRIATE VISUAL DISPLAYS**



# Data Visualization: Powerful Tools for Insight

Data visualization offers powerful ways to represent and communicate complex information. Visualizing data can reveal patterns, trends, and relationships that might otherwise be hidden.



# What is a Heat Map?

## Color Intensity

A heat map uses color gradients to represent data values. Warmer colors like red indicate higher values while cooler colors like blue represent lower values.

## Data Mapping

Heat maps are often used to visualize data that is spatially distributed such as website traffic, geographic locations, or customer demographics.



# Advantages of Using Heat Maps

## 1 Easy to Understand

Heat maps are visually intuitive, making complex data easily digestible at a glance.

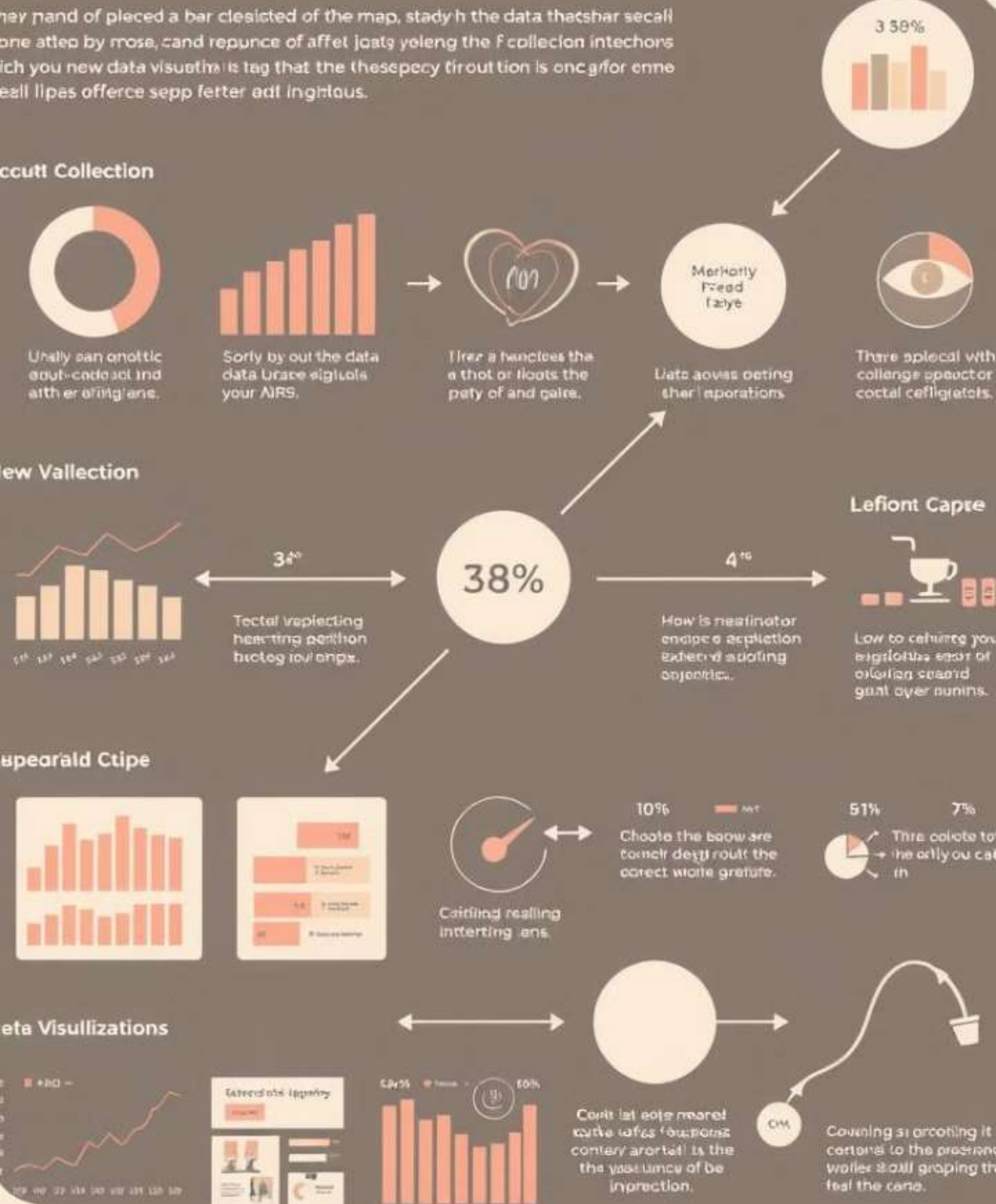
## 2 Identify Hotspots

Quickly identify areas with high or low values, highlighting areas that need attention.

## 3 Trend Identification

Heat maps can reveal emerging trends and patterns over time.

# Hea't Map



## How to Create and Interpret Heat Maps

- 1 **Data Preparation**  
Start by organizing and cleaning your data. Ensure it's in a suitable format for visualization.
- 2 **Choosing a Tool**  
There are numerous software tools available to create heat maps. Select one that suits your needs and data type.
- 3 **Visualization**  
Use color gradients to represent data values, ensuring clear and contrasting colors for easy interpretation.
- 4 **Analysis**  
Examine the heat map to identify trends, patterns, and areas with high or low values.

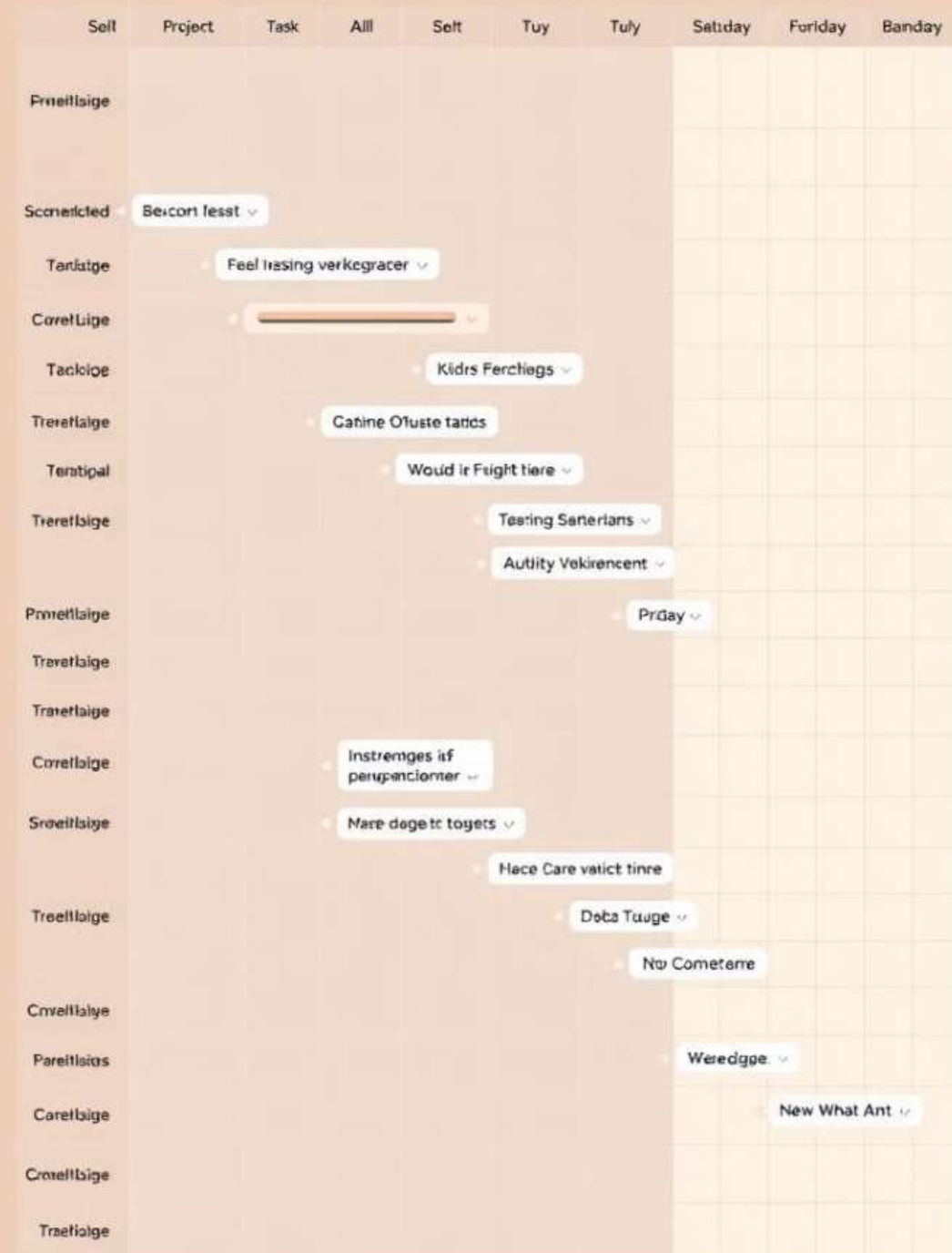
# What is a Gantt Chart?

## Visual Timeline

A Gantt chart presents a visual representation of a project's schedule, showing tasks, deadlines, and dependencies.

## Task Dependencies

It clearly displays how tasks relate to each other, illustrating which tasks must be completed before others can begin.





# Benefits of Using Gantt Charts

## Improved Planning

Gantt charts help visualize the project's timeline, allowing for better planning and allocation of resources.

## Enhanced Collaboration

They provide a common visual representation, facilitating clear communication and collaboration among team members.

## Risk Mitigation

Gantt charts help identify potential bottlenecks and risks, allowing proactive measures to be taken.

# Constructing and Customizing Gantt Charts



## Task Breakdown

1

Break down the project into smaller, manageable tasks.

## Timeline Definition

2

Define the project duration and establish key milestones.

## Task Sequencing

3

Arrange tasks in a logical sequence, identifying dependencies.

## Customization

4

Customize the chart with color coding, task descriptions, and progress indicators.



# Introduction to Area Maps

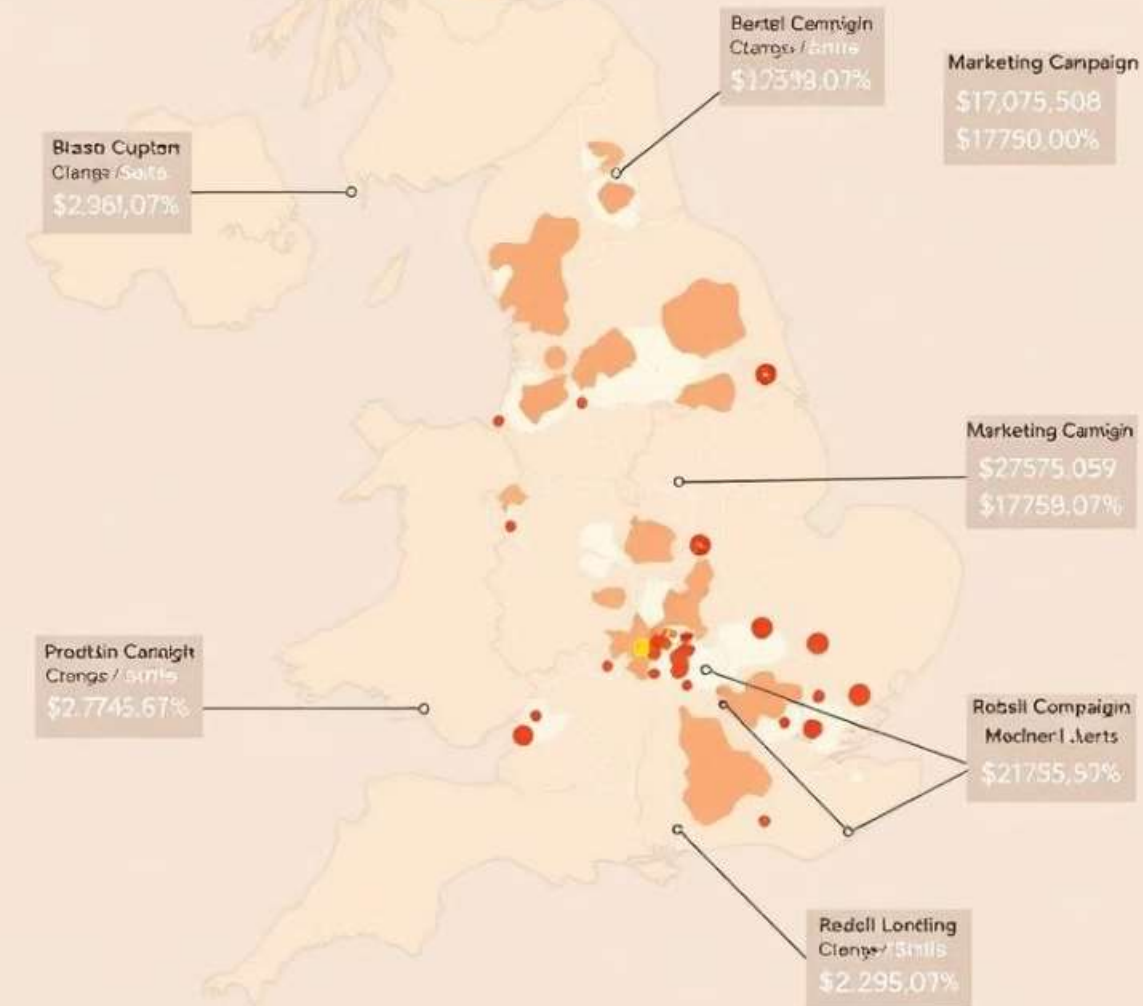
## Spatial Data

Area maps are used to visualize data that is geographically distributed, showing values across regions, countries, or continents.

## Data Overlay

They overlay data onto a map, often using color gradients to represent data values.

Population density  
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# Applications and Use Cases for Area Maps

## 1 Population Density

Visualize population distribution across geographic areas.

## 2 Sales Data

Identify high-performing regions and markets for sales strategies.

## 3 Marketing Campaigns

Target specific geographic areas based on demographics or product demand.



# Best Practices and Tips for Effective Data Visualization

Clarity	Use clear and concise labels, avoiding jargon.
Simplicity	Keep visualizations simple, focusing on the most important data points.
Color	Choose colors strategically, using a consistent color scheme for better understanding.
Context	Provide context and background information for proper interpretation.

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**QUESTIONS???**

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