



# **SNS COLLEGE OF ENGINEERING**



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Accredited by NAAC-UGC with 'A' Grade

Approved by AICTE & Affiliated to Anna University, Chennai

**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

**19AD504 – DATA VISUALIZATION**

## **UNIT 4**

### **4.3 AFFORDANCES, ACCESSIBILITY AND AESTHETICS**

#### **1. Affordances**

##### **What are Affordances?**

Affordances are the visual cues and clues that suggest how a user can interact with data visualizations.

They are the properties of an object or environment that allow an individual to take action. In data visualization, affordances can include things like color, shape, size, and position.

##### **Why are Affordances Important?**

Affordances are critical to effective data visualization because they help users understand how to interact with the information being presented.

They make it easier for users to engage with the data and draw meaningful insights from it. Without affordances, data visualizations can be confusing and difficult to use.

#### **2. Accessibility**

##### **Importance of Accessibility**

Data visualization should be accessible to all users, regardless of their abilities or disabilities.

It is important to ensure that visualizations are designed with accessibility in mind, so that everyone can benefit from the insights they provide.

## **Accessibility Guidelines**

There are several guidelines that can be followed to make data visualizations more accessible.

For example, using high-contrast colors, providing alternative text for images, and ensuring that the visualization can be navigated using a keyboard are all important considerations.

## **Tools and Resources**

There are many tools and resources available to help designers create accessible data visualizations.

For example, there are color contrast checkers, screen reader simulators, and accessibility plugins for popular visualization tools like Tableau and Power BI.

## **3.Aesthetics**

While the primary goal of data visualization is to communicate information effectively, aesthetics play a crucial role in engaging and retaining the attention of the audience.

Aesthetically pleasing visualizations can make complex data more accessible and understandable, while also enhancing the overall user experience.

- Color choices can greatly impact the readability and interpretation of data. Careful consideration should be given to color contrast, saturation, and hue to ensure that the visualization is both visually appealing and easy to understand.
- Typography is another important aspect of data visualization aesthetics. Choosing the right font, size, and style can greatly enhance the legibility and overall look of the visualization.
- Whitespace and layout are also critical components of a visually appealing visualization. Proper use of whitespace can help to guide the viewer's eye and create a sense of balance and harmony within the design.