

**AICTE EY-GDS Internship December'23**  
**Self-Paced Study Material for Internship:**  
**Topic: Data Visualization**

**Principles of data visualization:**

- Effective data visualizations prioritize clarity, ensuring that the intended message is easily understandable, and accuracy, representing data truthfully and without distortion.

**Choosing the right chart:**

- Select appropriate chart types, such as bar charts, pie charts, line charts, or maps, based on the nature of your data and the insights you aim to convey.

**Matplotlib and Seaborn libraries:**

- Matplotlib and Seaborn are powerful Python libraries for creating both simple and advanced visualizations, providing flexibility and customization options.

**Customizing visuals:**

- Customize visual elements, including colors, labels, axes, and titles, to enhance the overall aesthetics and effectiveness of your data visualizations.

**Interactive visualizations:**

- Utilize libraries like Plotly and Bokeh to create interactive visualizations, allowing users to engage with and explore data dynamically.

**Data storytelling:**

- Data storytelling involves using visuals as a narrative tool to communicate insights effectively, making data more accessible and compelling for a broader audience.

**Best practices for presenting visualizations:**

- When presenting data visualizations, adhere to best practices such as providing context, focusing on key insights, and ensuring clarity to effectively convey the intended message.

**Resources:**

1. Matplotlib Tutorial: <https://matplotlib.org/>
2. Seaborn Tutorial: <https://seaborn.pydata.org/tutorial.html>
3. Plotly Python Tutorial: <https://plotly.com/python/>
4. Bokeh Python Library: <https://docs.bokeh.org/en/latest/>
5. Storytelling with Data: <https://www.storytellingwithdata.com/>
6. Effective Data Visualization with Python: <https://www.datacamp.com/tracks/data-visualization-with-python>