

St. Xavier's College (Autonomous), Ahmedabad

Syllabus of Semester – I of the following departments under
Faculty of Data Science based on Undergraduate Curriculum
Framework to be implemented from the Academic Year 2025-26.

DEPARTMENT OF DATA SCIENCE

BSc. Artificial Intelligence and Machine Learning (Hons.)

Skill Enhancement Course: Data Visualization and Story Telling

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credit Distribution of The Course			Eligibility Criteria	Prerequisite(s) of the Course (if any)
	Lecture	Tutorial	Practical / Practice		
Data Visualization and Story Telling	1	0	2	10 + 2 from a recognized board in any stream	Nil

Course Objectives:

After completing this course, students will be able to:

- CO-1: Understand the core design principles behind effective data visualization, including choosing appropriate chart types, using color and shape effectively, and avoiding common pitfall
- CO-2: Identify various chart types and understand when to use what
- CO-3: Develop skills in analyzing data through visualization.
- CO-4: Gaining hands-on experience with popular data visualization tools.

UNIT	TOPICS / SUBTOPICS	Hours
1	• Introduction to Visualization: Tufte's Data Visualization Principles, Visualization of Numerical Data, Visualization of Text Data	15
2	• Visual story telling: Story telling framework: Types of narratives: author driven narratives and reader-driven narratives, Seven different types of story types and how to create a narrative around a data science problem through visualization, Misleading with charts: how bad visualization can be misleading in decision making	15

Essential / Recommended Readings:

- Sharada Sringswara, Purvi Tiwari, U. Dinesh Kumar (2022) Data Visualization: Storytelling Using Data, Wiley

Suggestive Readings:

- Cole Nussbaumer Knaflic (2015) storytelling with data ; a data visualization guide for business professionals, Wiley.