

**Course Instructor:** Dr Chiranjib Sur

**Course Webpage:** <https://chiranjibsuruf.github.io/courses/da332.html>

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**Objectives:** Data visualization turns raw data into clear stories, so you can spot patterns, explain insights, and make confident decisions faster. It's a must-have skill for modern careers because the best ideas win only when you can communicate them visually and convincingly.

**Prerequisites:** Introduction to Statistics, Introduction to Data Science, Basic Programming, Machine Learning, Deep Learning, Data Mining.

**Course Code:** DA332

**Course Name:** Data Visualization

**Credits:** 1-0-3-5

**Syllabus:** Introduction to data visualization: Definition, Various forms of data visualization; Grammar of graphics: Designing graphs or plots layer-by-layer; Grouping and Faceting; Design Principles; Different chart families: Category, Hierarchical, Relation, Temporal and Spatial (CHRTS); Real time data visualization. Lab assignments and mini projects will be given as per the theory discussed in lectures.

**Textbooks:**

- K Healy, Data Visualization: A Practical Introduction, 1st Edition, Princeton University Press, 2019.
- Claus Wilke, Fundamentals of Data Visualization: A primer on making informative and compelling figures, 1st Edition, O'Reilly Publications, 2019.

**References:**

- A Kirk, Data Visualization: A Handbook for Data Driven Design, 2nd Edition, 2019.
- L Wilkinson, The Grammar of Graphics, 2nd Edition, Springer, 2013.