

**Machie Learning Lab**  
**IV Sem, DSE, Feb 2023**

**Week - 03**

1. Draw the graphs asked in week\_2 *mtcars* & *cereals* dataset (3+1).
2. Generate a dataset of 20+ random number. Apply suitable dataset to draw the following plots:
  - a) Histograms, Line plots in a 2-D plane.
  - b) Bar charts: Normal, Side by side bar charts, Stacked Bar charts.
  - c) Sine curves using `math.pi`, `range` and `arange` functions.
  - d) 3D Scatter and Surface plots using `matplotlib` and `seaborn` packages.
  - e) Violin plots using `Seaborn`.
  - f) Pie charts.
3. Draw the Box Plots for five number summary for numerical columns of *iris* and *mtcars* dataset.
4. Create dataset of student marks in 5 subjects program wise (CSE, ECE, EEE, ICT programs) with for atleast 10 students each. Draw all suitable charts for this data.
5. Create a matrix using `numpy`. Perform the matrix transpose, inverse and multiplication.

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