**B.Tech 4 semester ML Lab Exercises under matplotlib and Seaborn packages including numpy for arrays.**

Installing matplotlib: **python -mpip install -U matplotlib**

Installing plotly: **python -mpip install -U plotly**

1) Examples using random number generation to do 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) Box Plots for five number summary for numerical columns of iris.csv and mtcars.csv.

(e) Student Marks in 5 subjects program wise: CSE, ECE, EEE, ICT programs with 5 subjects and their respective marks for 10 students atleast. Generate data for these programs and individual subjects. Draw all possible bar charts for this data.

(f) 3D Scatter and Surface plots using matplotlib and seaborn packages.

(g) Violin plots using Seaborn.

(h) Pie charts.

Ask everyone to prepare and work out examples based on the above concepts for the next week.