BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

III Year II Semester

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0	0	3	1.5

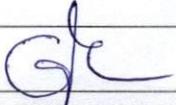## DATA VISUALIZATION LAB

23AM6L02

COURSE OBJECTIVES:

• To visualize the different datasets using histograms, line charts.

• To understand the use of bar charts and box plots.

• To understand Scatter plots, mosaic plots

• To understand different Map visualizations

• To learn advanced graphs such as correlogram, heatmap and 3D graphs.

COURSE OUTCOMES: At the end of the course student will be able to

• Visualize the different datasets using histograms, line charts.

• Make use of bar charts and box plots on different datasets

• Apply Scatter plots, mosaic plots in R for different datasets

• Apply different Map visualizations in R

• Create advanced graphs such as correlogram, heat map and 3D graphs

List of Experiments:

1. a) Load VA Deaths (Death Rates in Virginia) dataset in R and visualize the data using different histograms.

b) Load air quality dataset in R and visualize La Guardia Airport's daily maximum temperature using histogram.

2. Load Air Passengers dataset in R and visualize the data using line chart that shows increase in air passengers over given time period.

3. a) Load iris dataset in R, visualize the data using different Bar Charts and also demonstrate the use of stacked plots.

b) Load air quality dataset in R and visualize ozone concentration in air.

4. a) Load iris dataset in R, visualize the data using different Box plots including group by option and also

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use color palette to represent species.

b) Load air quality dataset in R and visualize air quality parameters using box plots.

5. Visualize iris dataset using simple scatter, multivariate scatter plot and also visualize scatter plot matrix to visualize multiple variables across each other.

6. Load diamonds dataset in R and visualize the structure in datasets with large data points using hexagon binning and also add color palette then use the

7. Load Hair Eye Color dataset in R and plot categorical data using mosaic plot.

8. Load mtcars dataset in R and visualize data using heat map.

9. Install leaflet library in R and perform different map visualizations.

10. Visualize iris dataset using 3d graphs such as scatter3d, cloud, xyplot.
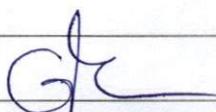
11. Make use of correlogram to visualize data in correlation matrices for iris dataset.

12. Install maps library in R and draw different map visualizations.

WEB REFERENCES:

1. https://www.analyticsvidhya.com/blog/2015/07/guide-data-visualization-r/

2. https://www.geeksforgeeks.org/data-visualization-in-r/

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