

Compare the state-of-the-art tools of data visualization.  
Write down the selection criterion for choosing the specific tool  
Classify the data types in the context of data visualization. Briefly explain by an example dataset.  
Convince how pre-attentive properties are necessary to exploit the human visual ability for better visualization.  
Illustrate it through an example.  
Write short notes on aggregation and granularity.  
Illustrate the various elements of effective data visualization by an example.

Define data visualization. Illustrate how data visualization is better than the traditional text-based data methods  
Explain the comparison between data gathering and data preparation?  
Explain Tufte's Principles of Design  
Why is data cleansing important for data visualization  
What are the steps required to design an information visualisation  
Discuss about different types of visualization.  
How to visualize hierarchical data with negative value? Explain  
Explain about the benefits of interactive data visualization.  
Does human interpretation play any role in the perception of visualization?  
What is the impact of visualization in business enterprise?  
What is the purpose of data visualization techniques?  
What is the importance of color hue in visual perception?  
Explain design challenges in information visualization.  
How does edges, contrast, color, keys, labels and legends affect visual perception?  
What, in your opinion are the advantages of visualizing complex data? Elaborate with suitable examples.

Explain the principles that enhance the effectiveness of data visualization with an appropriate example?  
Explain the types of visualization with a suitable example?  
Describe data visualization as a discovery tool?  
Compare presentation graphics and exploratory graphics.  
Write short note on trellis plot.  
Design a graphical layout to show the relationship between the X & Y parameter and  
apply the features of complete plot.  
Design a bipartite graph for the following contingency table. Also, describe the graphical elements.

Design a graph for the following correlation matrix. Also, describe the graphical elements.  
With an example demonstrate different line style in a single graph.  
How can a one-dimensional multivariate data be visualized?  
Explain tree visualization with the help of suitable example.  
Briefly explain some 2-D data projection techniques.  
Explain grammar of graphics. What are different components of plot?  
What is the use of linked views? Explain various visualization techniques for linked views.  
With the help of appropriate data, define the following operations commonly used in data visualization and  
briefly explain their function and application: -  
Multivariate Data Glyphs, Graphical Representation & Tree and Forest Visualization  
How graphical representations helps and explain it types?  
Why the visualization of high-dimensional data is important? Explain  
Explain the concept of Linked Views for Visual Exploration  
Describe with an example of geolocated data visualization.

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Describe about Data Visualization examples on Location Data  
Explain different types of multivariate analysis methods with example  
Briefly explain Smoothing Techniques for Visualization  
Explain the concept of Structured Sets of Graphs  
Explain any two Applications of Data Visualizations  
Explain the concept of Machine Learning Visualization

Explain the types of information visualization with help of a proper illustration.  
Explain the types of Concept visualization with help of a proper illustration,  
Explain the types of Strategy visualization with help of a proper illustration,  
Explain the types of knowledge visualization with help of a proper illustration.  
Explain the Architecture of Splunk. How Splunk is useful in log analysis.  
illustrate the different challenges in big data visualization.