Q2) Load the Dataset

**Integrating visualization and analytics for decision-making:** Data Collection and Preparation, Analytics, Visualization, Interactive Dashboards, Real-time Monitoring, Feedback Loop

**Visual analytics techniques for data exploration:** Scatter Plots and Bubble Charts, Histograms and Bar Charts, Heatmaps, Box Plots and Violin Plots, Line Charts and Time Series Plots, Parallel Coordinates, Tree Maps, Network Graphs, Interactive Dashboards, Geospatial Visualizations

**Presenting complex analytics to non-technical stakeholders:** Know Your Audience, Identify Key Insights, Simplify Visualizations, Provide Context, Tell a Story, Use Analogies and Examples, Interactive Demonstrations, Encourage Questions and Discussion, Provide Follow-Up Resources

**Ethical considerations in data visualization and communication:** Accuracy and Truthfulness, Transparency, Privacy and Confidentiality, Inclusivity and Accessibility, Cultural Sensitivity, Bias and Fairness, Informed Consent, Data Ownership and Attribution, Responsible Storytelling, Continuous Reflection and Improvement

**Importance**: Clarity & Understanding, Insight Discovery, Storytelling, Decision Making, Engagement, Effective Communication, Long term Retention, Feedback & Iteration, Error Detection & Removal, Transparency, Customization & Interactivity

**Overview Data Visuals**: Categorical – Stack Bar/Pie/Donut, Numerical – Line/Histogram/Box/Scatter, Time Series – Gantt/Candle stick/Line/Area, Geospatial – Cloropleth/Bubble/Heatmap/Clustogram, Multivariate – Radar/Trellis/Pairplot/Parrel Coordinates, Text – Wordcloud/Sentiment Analysis/Text Nw Visual/Topic Model, Hierarchical – Tree/Sunburst

**Gestalts Principles**: Proximaty, Similarity, Continuity, Closure, Symmetry

**Other Principles**: Hierarchy, Contrast, Simplicity, Familarity, Cognitive Load, Color Perception, Typography, Chunking, Motion, Accessibility, Narrative Flow

**Best Practices**: KYC, Choose Appropriate Visuals, Add legends, Add labels, Keep it simple, Avoid junking, Avoid motions and 3d, Keep consistant scales

replace:

REPLACE([Sales],'.','-')

sub category param :

IF [Sub-Category]=[Sub Cat PARA] THEN TRUE else FALSE end

fill with zero:

RUNNING\_SUM(ZN(SUM([Sales])))

fill with previous value:

IIF(ISNULL(SUM([Sales])),PREVIOUS\_VALUE(0),SUM([Sales]))

fixed lod:

{FIXED : AVG([Sales])}

include lod:

{ INCLUDE [Customer Name]: SUM([Sales])}

exclude lod:

{ EXCLUDE [State/Province]: SUM([Sales])}

cohort uses fixed:

{FIXED [Customer Name]: MIN([Order Date])}

what if:

SUM([Sales])\*([what is param])

SCRIPT\_BOOL("

lst=[]

for i in \_arg1:

lst.append(i>0)

return lst

",SUM([Profit]))

SCRIPT\_STR("

lst=[]

for i in range(0,len(\_arg1)):

lst.append(\_arg1[i]+\_arg2[i])

return lst

",

ATTR([Category]),ATTR([Sub-Category]))