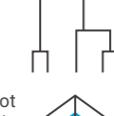
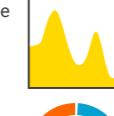
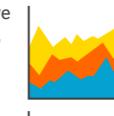


# Cheat Sheet: Data Visualization with KNIME Analytics Platform

## UNIVARIATE

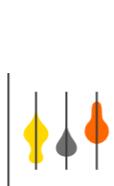
### GENERAL VISUALIZATIONS

- Pie Chart:** Visualizes categorical data using circular charts with slices representing categories and sizes indicating proportions.
- Bar Chart:** Generates graphical representations of categorical data using rectangular bars, providing insights into category frequency or distribution.
- Line Plot:** Creates line charts to visualize trends, patterns, or correlations between two numeric variables.
- Heatmap:** Visualizes tabular data using a color-coded matrix, revealing patterns and correlations.
- Stacked Area Chart:** Displays cumulative contributions of categories or variables, illustrating trends and relative proportions.
- Density Plot:** Visualizes numeric variable distributions as smooth curves, facilitating comparisons.
- Sunburst Chart:** Creates hierarchical visualization representing structure and composition of categorical or hierarchical data.
- Hierarchical Cluster View:** Visualizes hierarchical clustering results.
- Radar Plot Appender:** Appends radar plot attributes to data based on user-defined rules or mappings. Enables multivariate visualization and comparison.
- Parallel Coordinates Plot:** Visualizes high-dimensional data with polylines connecting points along different axes. Useful for multivariate analysis and pattern identification.



### STATISTICAL VISUALIZATIONS

- Scatter Plot:** Visualizes relationships between two numeric variables through points on a plane, identifying correlations, clusters, and patterns.
- Histogram:** Displays the frequency distribution of a numeric variable, identifying patterns and anomalies.
- Violin Plot (Plotly):** Creates violin plots to visualize the distribution of multiple numeric variables using the Plotly library.
- Box Plot:** Displays the distribution of a numeric variable with quartiles, median, and outliers. Useful for comparing distributions and identifying outliers.



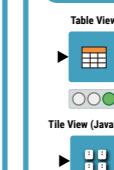
### TIME SERIES VISUALIZATIONS

- Scatter Plot Matrix:** Generates matrix of scatter plots to visualize pairwise relationships between multiple variables.
- Bubble Chart (Plotly):** Useful for visualizing tagged terms of a document. Each term will be highlighted and its corresponding tags will be displayed above it.
- Network Viewer:** Visualizes and explores network or graph data, useful to observe interconnections between variables.



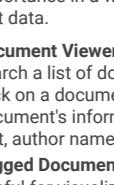
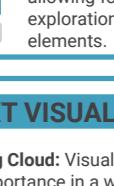
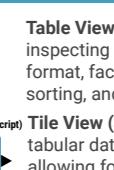
### OTHER VISUALIZATIONS

- Table View:** Allows viewing and inspecting data in a tabular format, facilitating exploration, sorting, and filtering.
- Tile View (JavaScript):** Displays tabular data in a grid layout, allowing for easy comparison and exploration of multiple data elements.



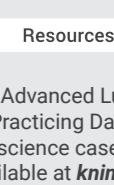
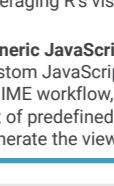
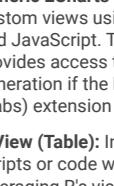
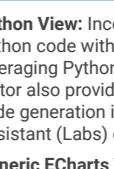
### TEXT VISUALIZATIONS

- Tag Cloud:** Visualizes word frequency or importance in a word cloud format for text data.
- Document Viewer:** Allows to view and search a list of documents. A double click on a document shows all the document's information, such as title, full text, author names, publication date, etc.
- Tagged Document Viewer:** Useful for visualizing tagged terms of a document. Each term will be highlighted and its corresponding tags will be displayed above it.

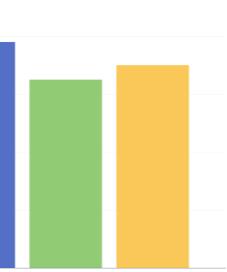


### CODE-BASED VISUALIZATIONS

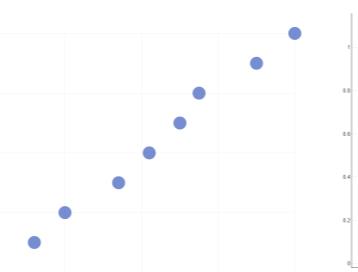
- Python View:** Incorporates custom Python code within a KNIME workflow, leveraging Python libraries. The code editor also provides access to AI assisted code generation if the KNIME AI Assistant (Labs) extension is installed.
- Generic ECharts View:** Allows creating custom views using Apache ECharts and JavaScript. The code editor also provides access to AI assisted code generation if the KNIME AI Assistant (Labs) extension is installed.
- R View (Table):** Integrates custom R scripts or code within KNIME workflow, leveraging R's visualization libraries.
- Generic JavaScript View:** Executes custom JavaScript code within a KNIME workflow, enabling the use of a set of predefined JavaScript libraries to generate the view.



## Comparison



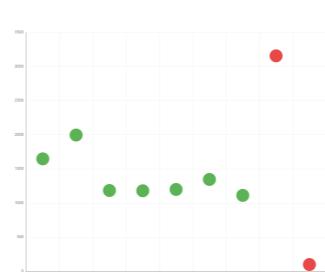
## Correlation



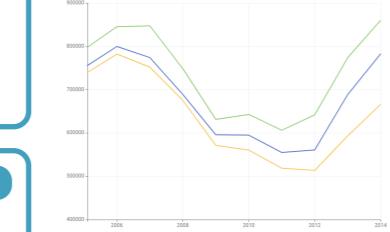
## Distribution



## Outliers



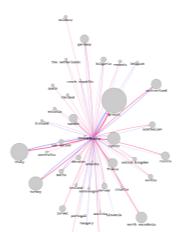
## Time



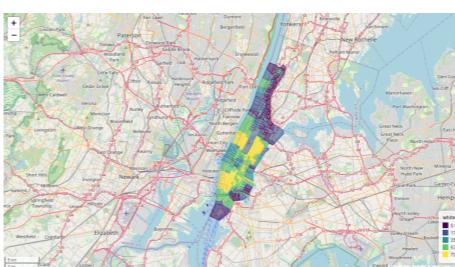
## Text



## Networks

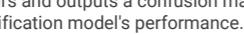
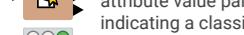
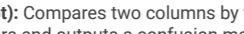
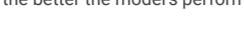
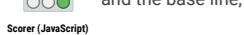
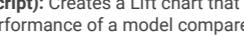
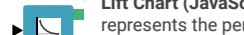
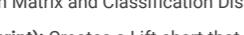
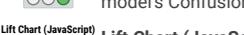
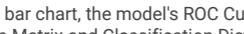
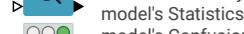
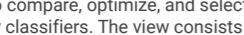
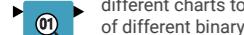
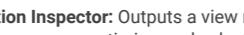
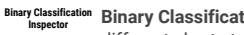
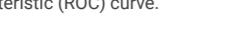
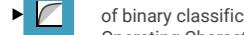
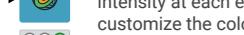
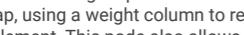
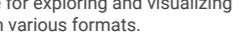


## Geography



### GEOSPATIAL VISUALIZATIONS

- Geospatial View:** Visualizes and explores geospatial data on interactive maps.
- Choropleth Map:** Generates thematic maps by coloring regions based on a specific variable.



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