Value of Visualization

terminology

data case- refers to an instance of the data set; synonymous with data item or data point

attribute- refers to properties of the data cases in the data set; synonymous with feature, dimension, or variable

relationship in the data- refers to attributes among the data, such as correlations, clusters, or distributions

			How would you rate your agreement with the following statements?						
			Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Insight	The visualization facilitates answering questions about the data	The visualization exposes individual data cases and their attributes	○	○	○	○	○	○	○
		The visualization facilitates perceiving relationships in the data like patterns & distributions of the variables	○	○	○	○	○	○	○
		The visualization promotes exploring relationships between individual data cases as well as different groupings of data cases	○	○	○	○	○	○	○
	The visualization provides a new or better understanding of the data	The visualization helps generate data-driven questions	○	○	○	○	○	○	○
		The visualization helps identify unusual or unexpected, yet valid, data characteristics or values	○	○	○	○	○	○	○
		The visualization provides useful interactive capabilities to help investigate the data in multiple ways	○	○	○	○	○	○	○
	The visualization provides opportunities for serendipitous discoveries	The visualization shows multiple perspectives about the data	○	○	○	○	○	○	○
		The visualization uses an effective representation of the data that shows related and partially related data cases	○	○	○	○	○	○	○
Time	The visualization affords rapid parallel comprehension for efficient browsing	The visualization provides a meaningful spatial organization of the data	○	○	○	○	○	○	○
		The visualization shows key characteristics of the data at a glance	○	○	○	○	○	○	○
	The visualization provides mechanisms for quickly seeking specific information	The interface supports using different attributes of the data to reorganize the visualization's appearance	○	○	○	○	○	○	○
		The visualization supports smooth transitions between different levels of detail in viewing the data	○	○	○	○	○	○	○
		The visualization avoids complex commands and textual queries by providing direct interaction with the data representation	○	○	○	○	○	○	○
Essence	The visualization provides a big picture perspective of the data	The visualization provides a comprehensive and accessible overview of the data	○	○	○	○	○	○	○
		The visualization presents the data by providing a meaningful visual schema	○	○	○	○	○	○	○
	The visualization provides an understanding of the data beyond individual data cases	The visualization facilitates generalizations and extrapolations of patterns and conclusions	○	○	○	○	○	○	○
		The visualization helps understand how variables relate in order to accomplish different analytic tasks	○	○	○	○	○	○	○
Confidence	The visualization helps avoid making incorrect inferences	The visualization uses meaningful and accurate visual encodings to represent the data	○	○	○	○	○	○	○
		The visualization avoids using misleading representations	○	○	○	○	○	○	○
	The visualization facilitates learning more broadly about the domain of the data	The visualization promotes understanding data domain characteristics beyond the individual data cases and attributes	○	○	○	○	○	○	○
	The visualization helps understand data quality	If there were data issues like unexpected, duplicate, missing, or invalid data, the visualization would highlight those issues	○	○	○	○	○	○	○