

High-Dimensional Visualization Using Continuous Conditioning

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Many methods for visualizing hypervariate data have been employed. A general technique is to display a subset of the total variable space. The variable space is divided into two disjoint sets. The graphing subspace and the conditioning subspace. Only the variables in the graphing subspace are displayed. A subset of the conditioning space is defined and an observation is visible only if it is an element of the subset. The subset is usually a point or box and an indicator function is used to determine if an observation appears on the graphic. Continuous conditioning provides several extensions. First, there are no restrictions on the subset. Second, the indicator function is replaced by a general distance function. Finally, any visual characteristics, such as color, can be determined by the distance an observation is from the subset. These generalizations allow for a wide variety of visualization methods.