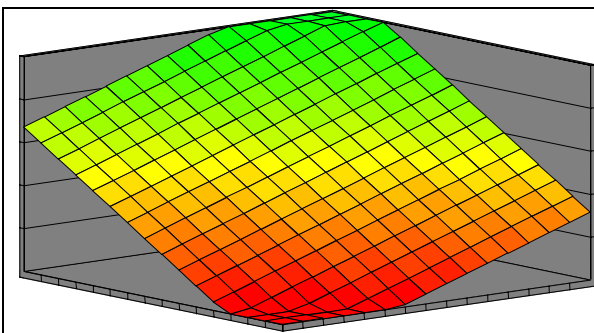
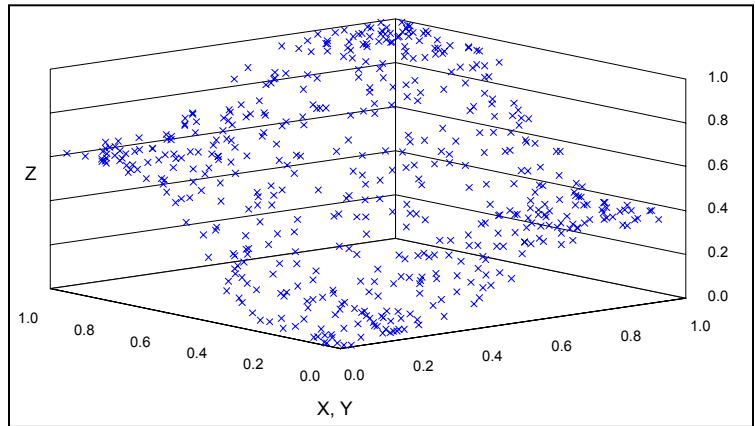
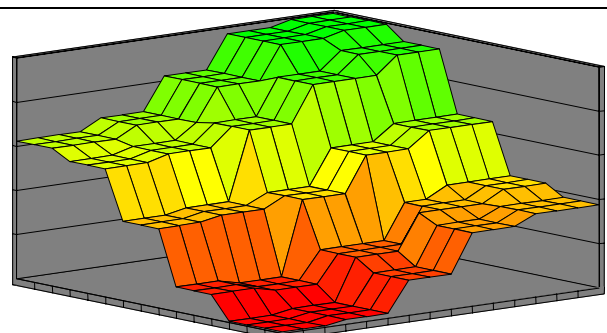


Comparing Modeling Technologies

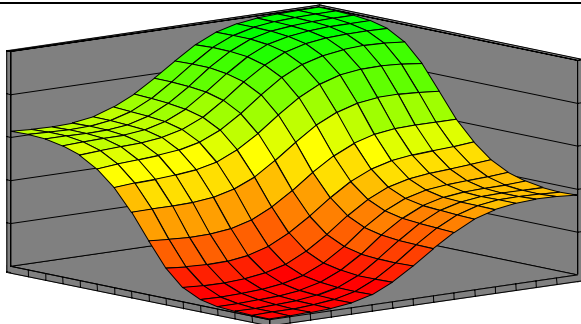
The following example shows how different model types learn the dynamics of the dataset on a simple 2-input / 1-output problem. The raw data used to build the model is shown in this 3-D scatter plot. The X & Y variables are model inputs and the Z variable is the output value that the model is tasked to predict.



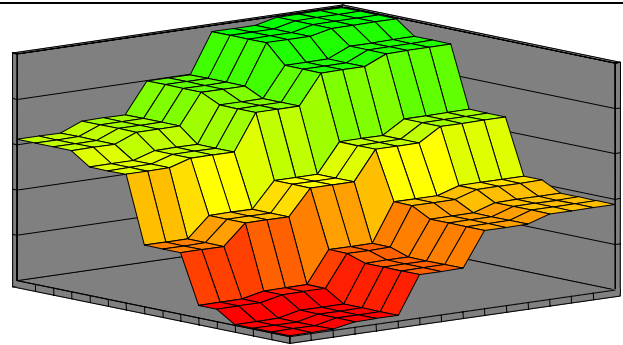
Linear Regression: The model's fit is limited to a plane through the data.



Cluster-based Model (Self-Organizing Map): Cluster centroids can be seen as plateaus on the surface.



Neural Network (MLP): The model is highly accurate due to its ability to represent non-linear, interacting variable relationships.



Decision Tree (CHAID): Rules (i.e., tree leaf nodes) can be seen as plateaus on the response surface.

It is interesting to note how the two segmentation methods (Decision Tree & Clustering) produce very similar results on this dataset.