Conventional methods of measuring data typically take a high dimensional dataset and such as population per country over hundreds of years and try to display it over a two d or sometimes even 3d graph. While this is great for low dimensional data sets, it is impossible to get a realistic comprehension from high dimensional datasets because it is impossible to display all the information you have on these low dimensional planes, because of this, what you are looking at and trying to analyze is always going to be missing data. This missing data might be key to understanding the correlation or driving factors between these high dimensional datasets and you might be making conclusions based on incorrect assumptions because of this. However, it doesn’t have to be this way. New techniques are emerging in the field that allow a user to view large data sets in high dimensional space by reconstructing old graphing and imaging techniques and displaying them in high dimensional space.

One of the first things you can do is construct a linear graph of what ever object you are interested in analyzing and displaying it over its full dimensional space. You can then take these graphs of individual objects and superimpose them over each other to see all the correlations of their datapoints when compared to each other. This makes the data easier to break down and you can visualize high dimensional data with ease. You can add to this technique by clustering the data together, grouping each object by key factors you observe as driving points in their data. If the data is still hard to read, you could try grouping the factors by drawing mean lines in the data. This will convert several different data points into tend lines. You could abstract the data by taking the mean lines and creating a wide envelope by grouping the data by two standard deviations. This will give you a more accurate and larger picture of each individual datapoint while removing the outliers. You could give the data even more filtering capabilities by adding search bars to the data sets and filtering only the data that is relevant to you instead of looking at every object at the same time.