

## Applications of Soft Clustering in Fraud and Credit Risk Modeling

>

> Segmentation of accounts for predictive modeling is very useful in many areas of fraud and credit risk modeling. For example, the behavior of transactors is very different from that of revolvers when it comes to credit card usage. However, it is not wise to classify each account into a transactor or revolver as there are many accounts that switch behavior from one segment to the other over a period of time. In addition to behavior switching, another problem with hard segmenting/clustering includes creating segments with very small amounts of data for model building. For example, if one wants to build behavior scoring models and uses credit limits and application risk scores for segmenting accounts, there might be very few accounts with low credit limits and high application risk scores. It is for problems like these that soft clustering or soft segmenting can come in handy.

>

> The presentation will list some of the areas of fraud and risk modeling where soft clustering can be useful. We will then review some of the soft clustering techniques. The presentation will close with some results based upon the author's soft clustering experience with real data.

>

> Vijay