

### **SMAI Assignment – 3**

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#### **Answer to Q-1-4: PCA for Categorical Values**

PCA can be applied in case of categorical data, but with a suitable non-linear transformation for each variable. Actually while trying to do PCA on categorical values, the difficulty comes in being able to represent distance between variable categories and individuals in feature space. There is a popular algorithm called as CATPCA which can be used. It converts categorical values to numerical ones using optimal scaling.