Mid Evals - SMAI

Team Number: 55 | Team Bash Party

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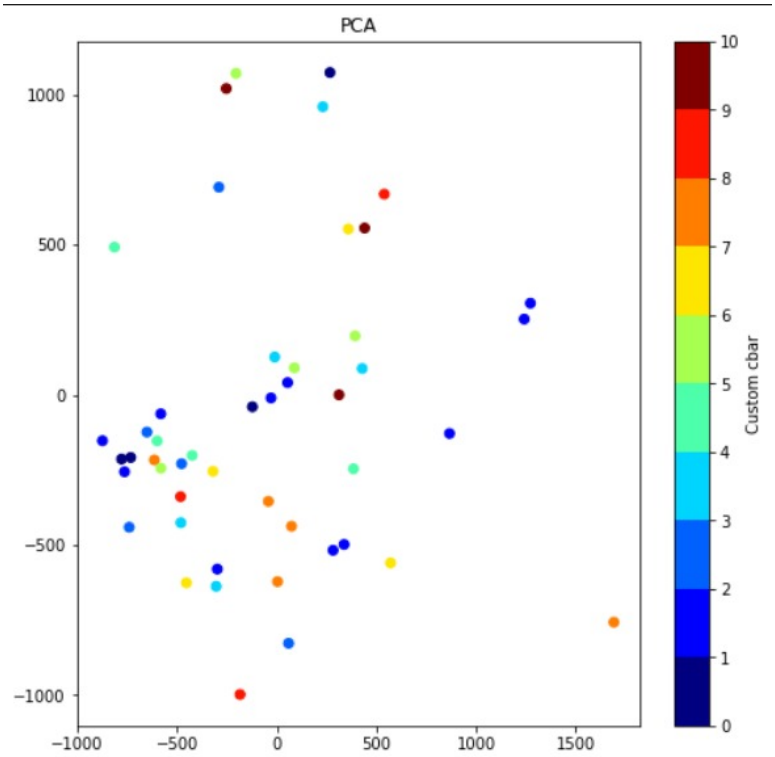
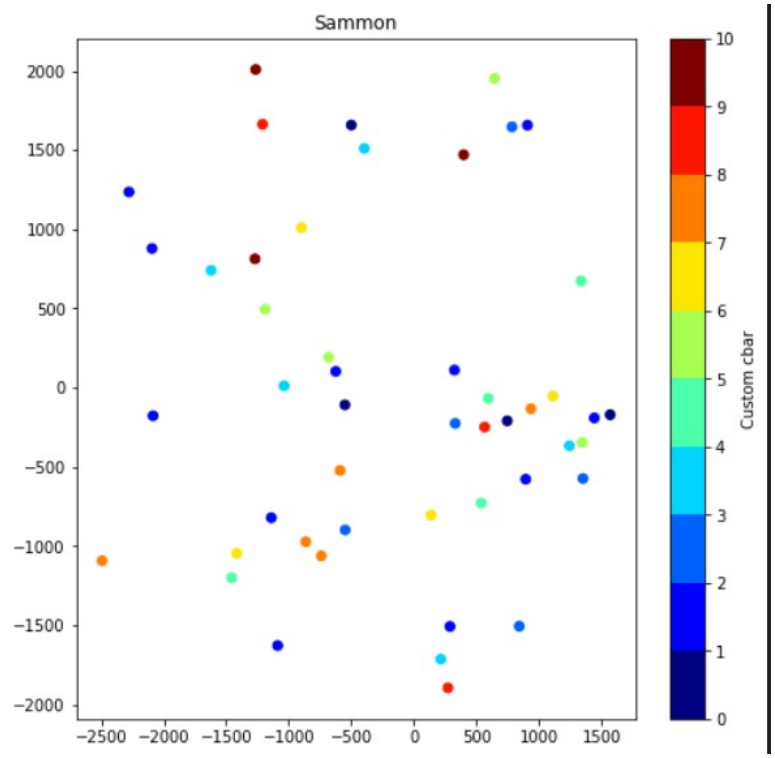
Work Done till Now

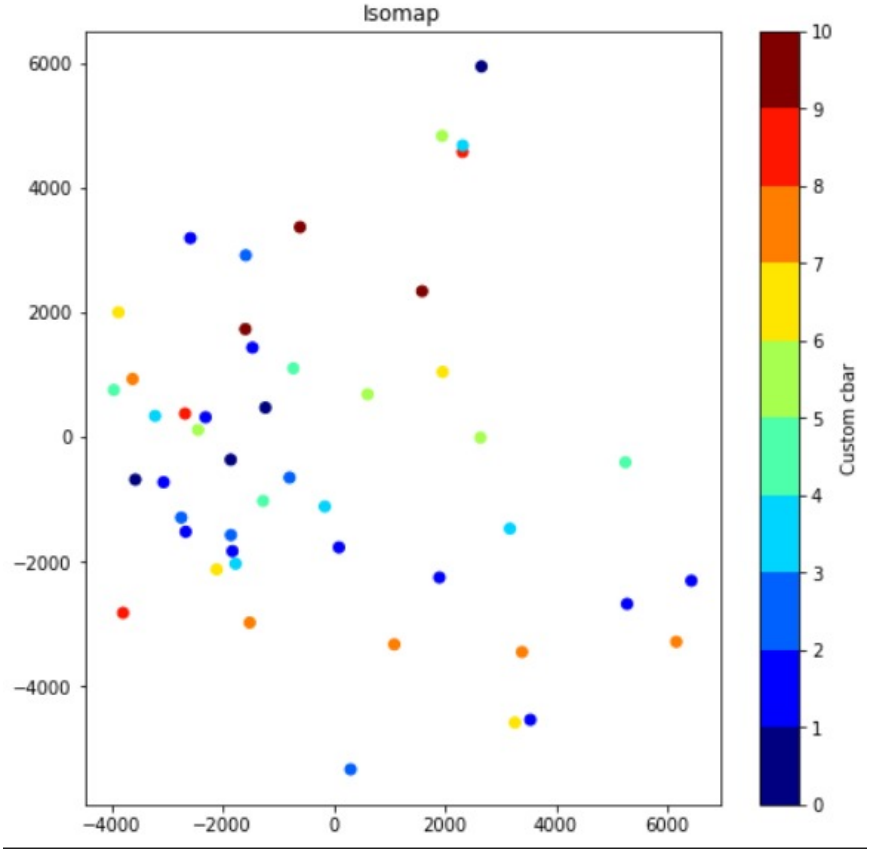
- Literature Survey :We explored and studied about different dimensionality reduction techniques that used for transforming and visualizing high dimensional data.
- Ran PCA, Sammon, Isometric Mapping on MNIST and Olivetti Faces datasets for dimensionality reduction.
    - MNIST and Olivetti Faces
        - Reduced the initial 784 dimensions to 2 using Principal Component Analysis (Visualization shown below)
        - MNIST Dataset (subsample of 100 points reduced to 2 dimensions using PCA)



- Reduced the initial 784 dimensions to 30 using PCA
    - Sammon Mapping to reduce 30 dimensions to 2 for visualisation

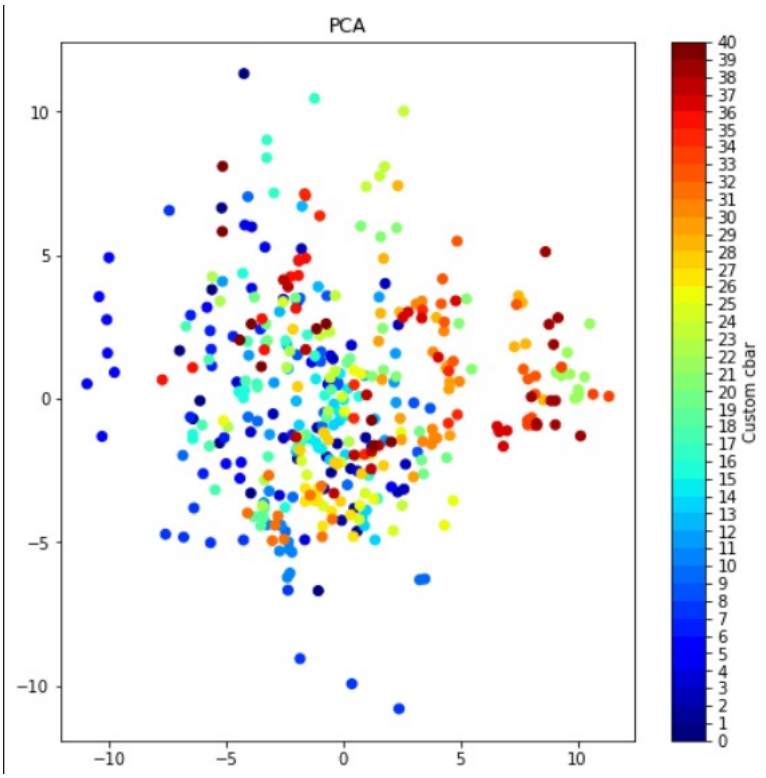


Isometric Mapping to reduce 30 dimensions to 2 for visualization

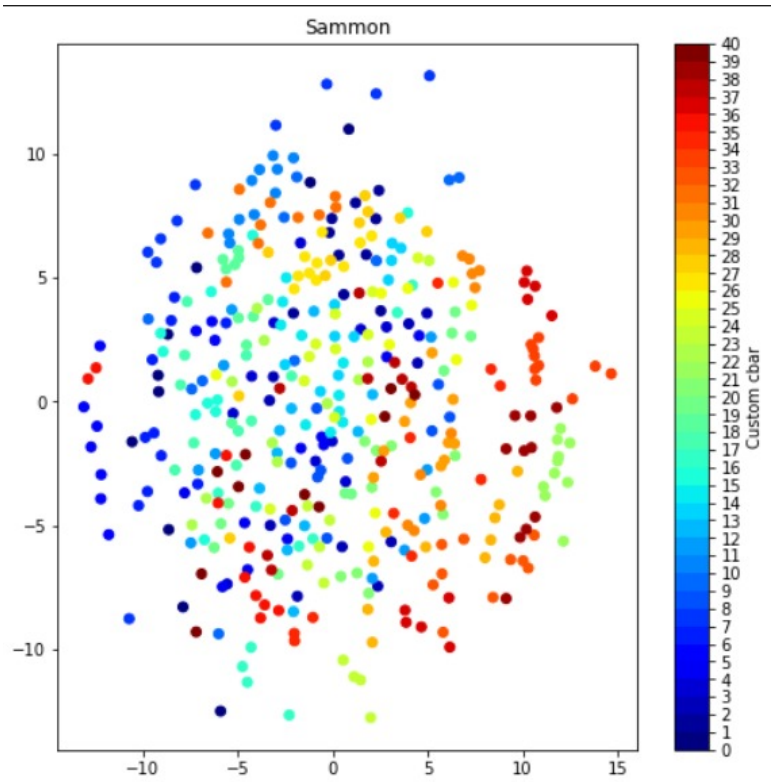


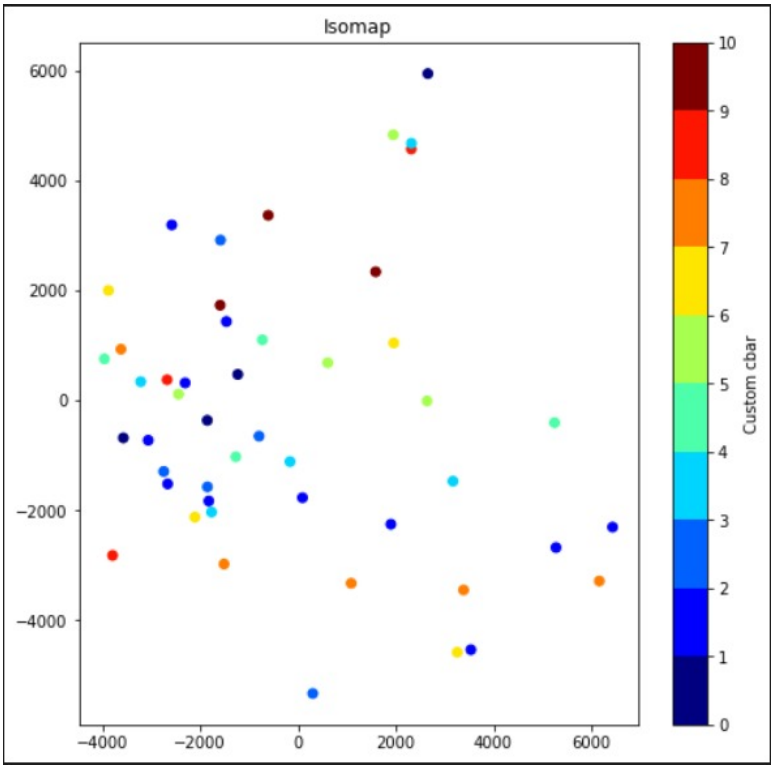
Olivetti Dataset

- Ran PCA on Olivetti Dataset to reduce 4096 dimensions to 2 (sub sample of 600 data points)



- Ran PCA to reduce 4096 dimensions to 30 . Then ran sammon and isometric mapping for visualization.


Sammon
Custom cbar


Isomap
Custom cbar