CSE472(MachineLearning Sessional)

Assignment 4: Principal component analysis (PCA) and expectation-maximization (EM) algorithm

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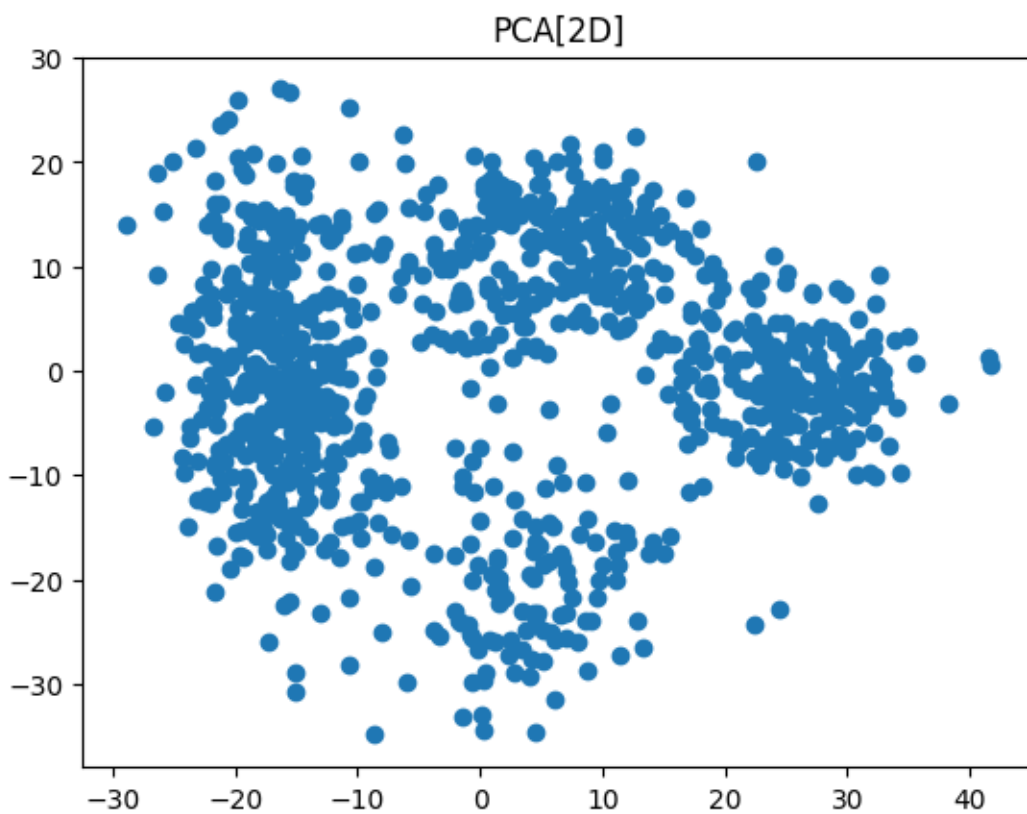
Lara khanom

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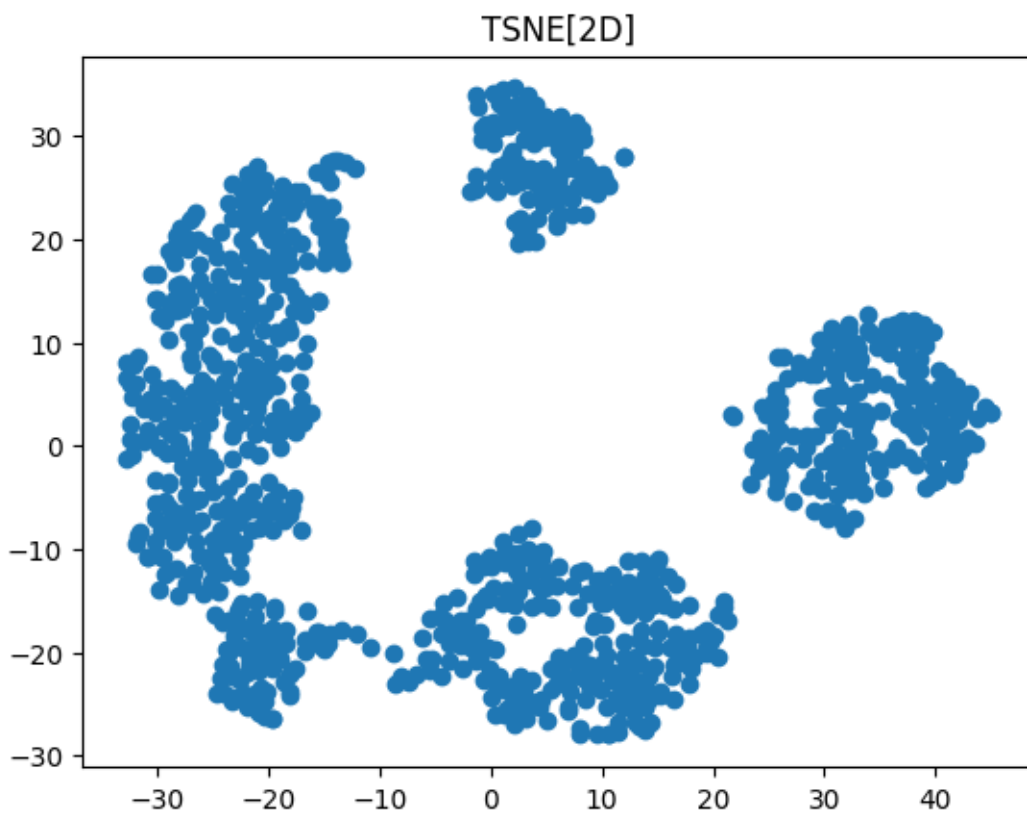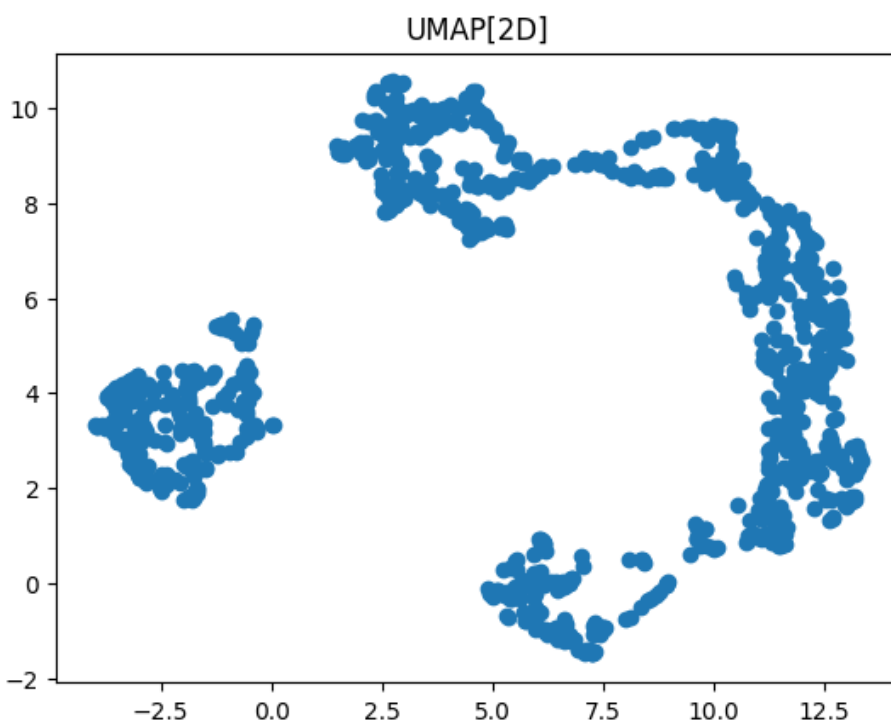
CSE (B1)

PCA

My implementation:

PCA[2D]

TSNE (component=2):

TSNE[2D]

UMAP (component=2):

UMAP[2D]

EM Algorithm Results

```
mean number of children in families with family planning:  1.7758134680139759
mean number of children in families without family planning:  4.905136377055165


proportion of families with  family planning:  0.3541137841203771
proportion of families without family planning:  0.6458862158796232
```

Instruction For Running code:

- Run block 6 under "running pca with data heading" For PCA implementation
- Run block 7 under "Running em algorithm with data" heading for em algo implementation