CSE472 (Machine Learning Sessional)

Assignment 4: Principal component analysis (PCA) and expectation-maximization (EM) algorithm
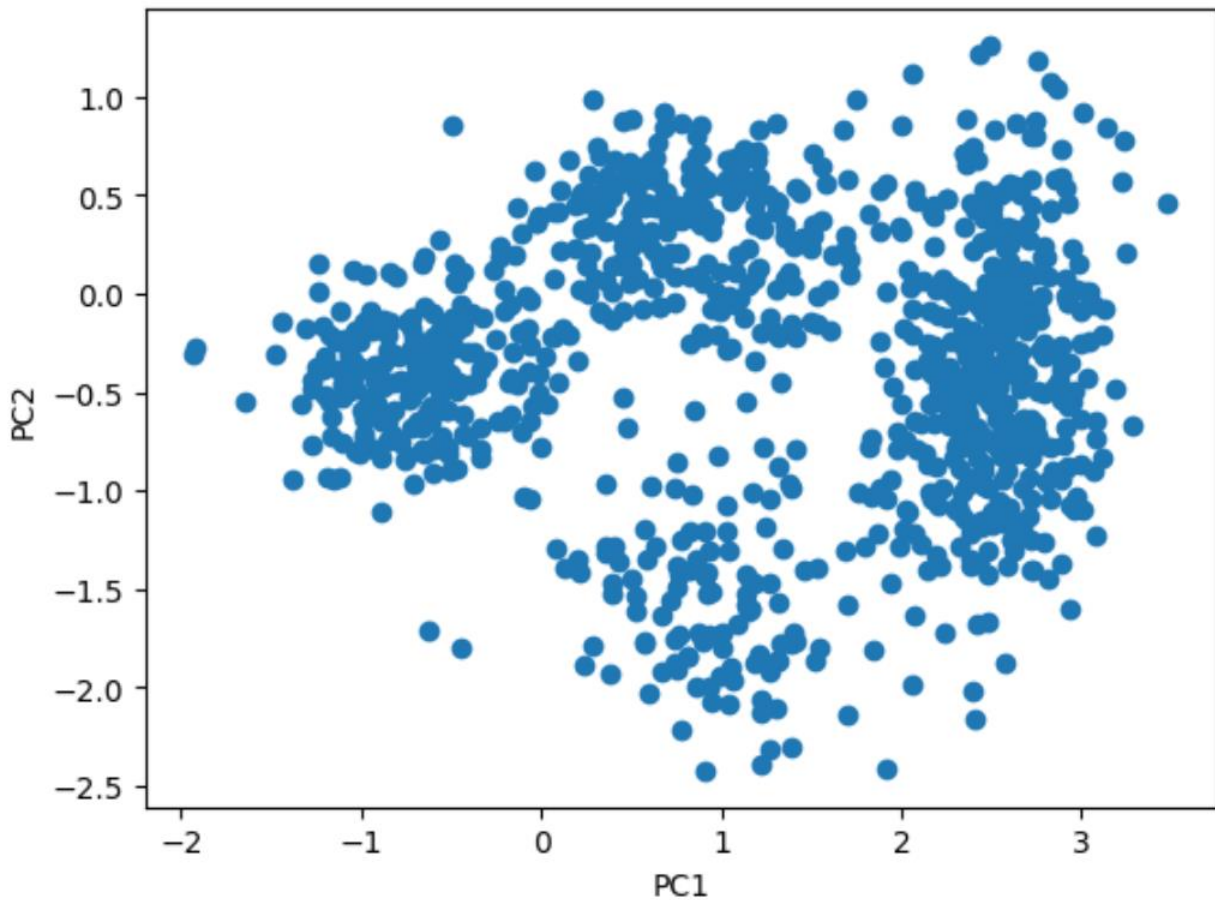
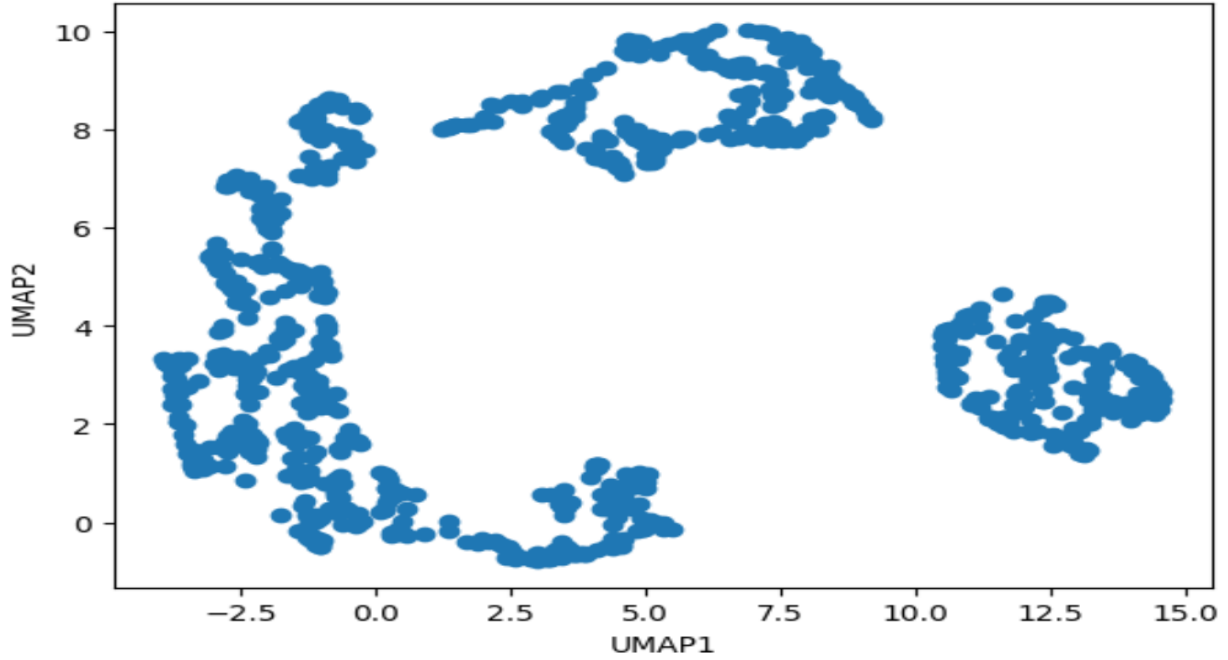**Student Id : 1905038**

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Section: A2

Instruction to run code:

After download 1905038.ipynb file , include "pca_data" , "em_data" file to this folder . Then click "Run all" and get output.
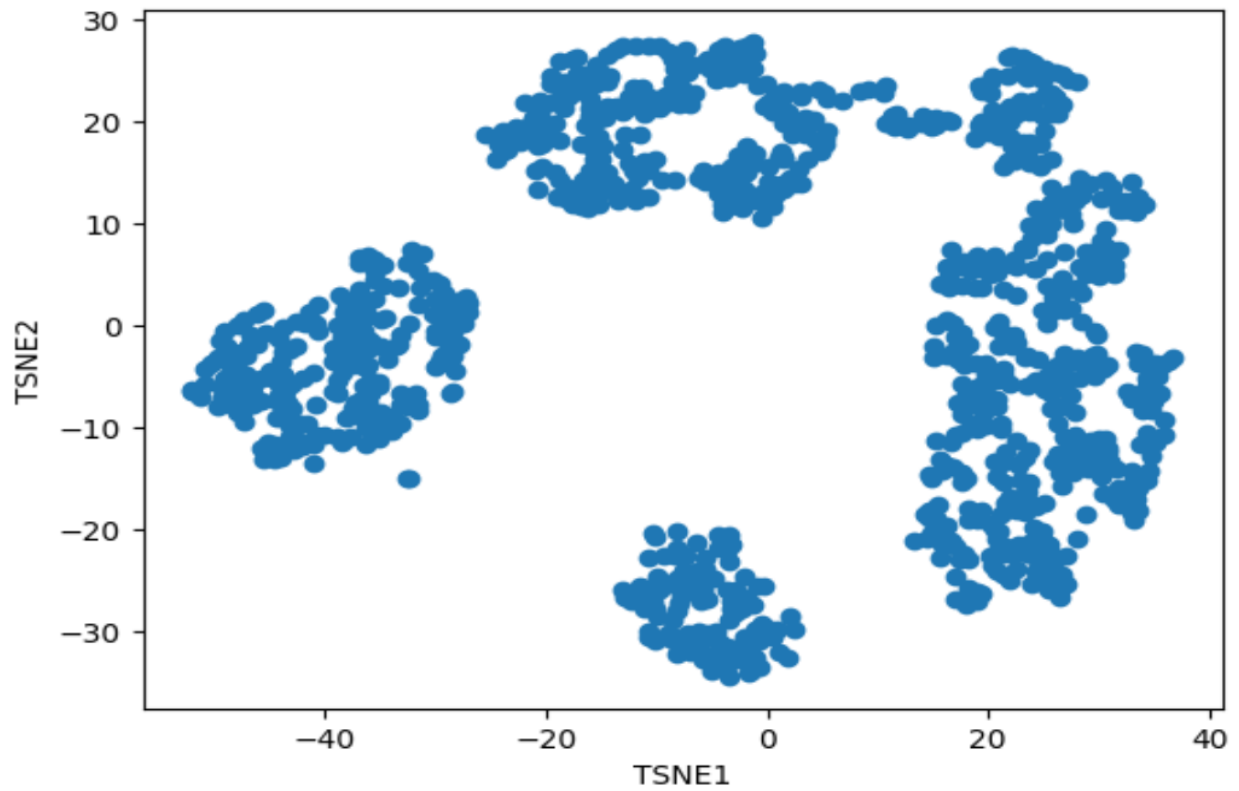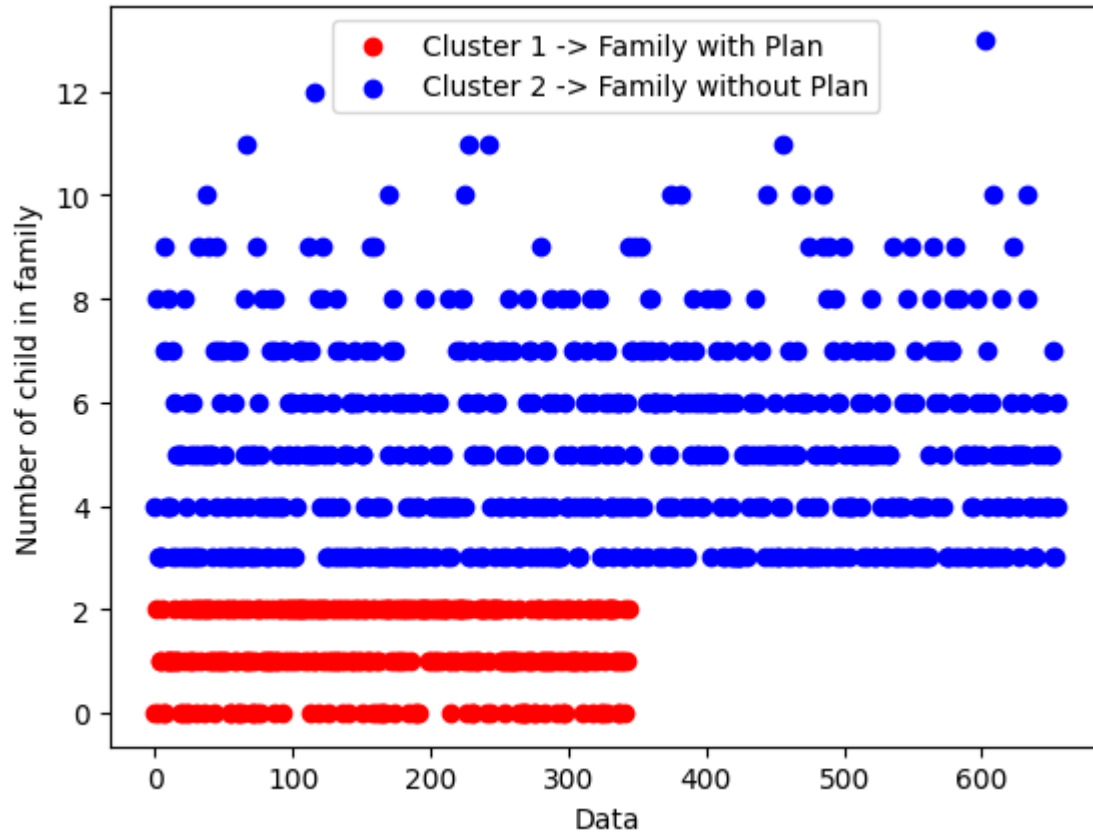
Plot for PCA:

UMAP plot:

tSNE plot:

EM algorithm:

After execute my code for number of components = 2 , i plot a scatter graph showing 2 cluster to visualize.

Output:

Mean Number Of Childrens with Family Planning : 1.7980605129686908

Mean Number Of Childrens without Family Planning : 4.924032456067782

The Portion of Families with Family Planning : 0.36053825068898654

The Portion of Families without Family Planning : 0.6394617493110144