Report

Running the Script
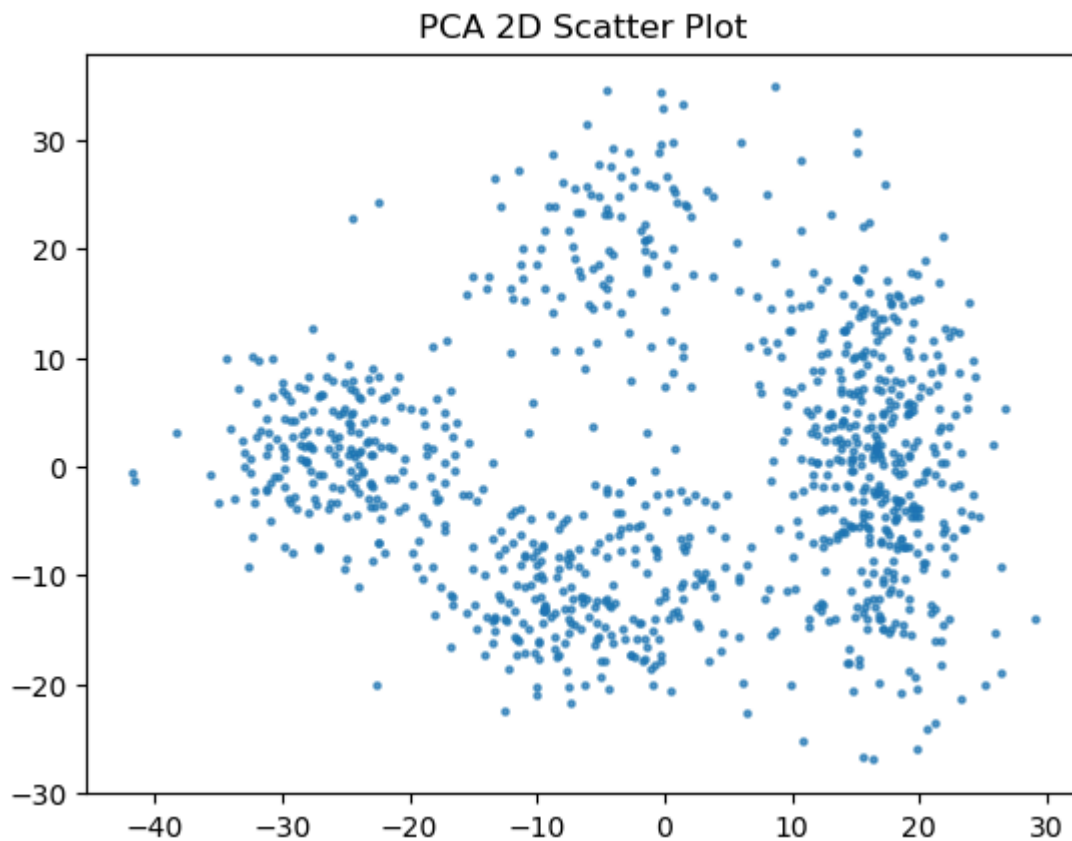
Instruction for VS-Code
- Press **Run All**
- It would execute pca and em implementation
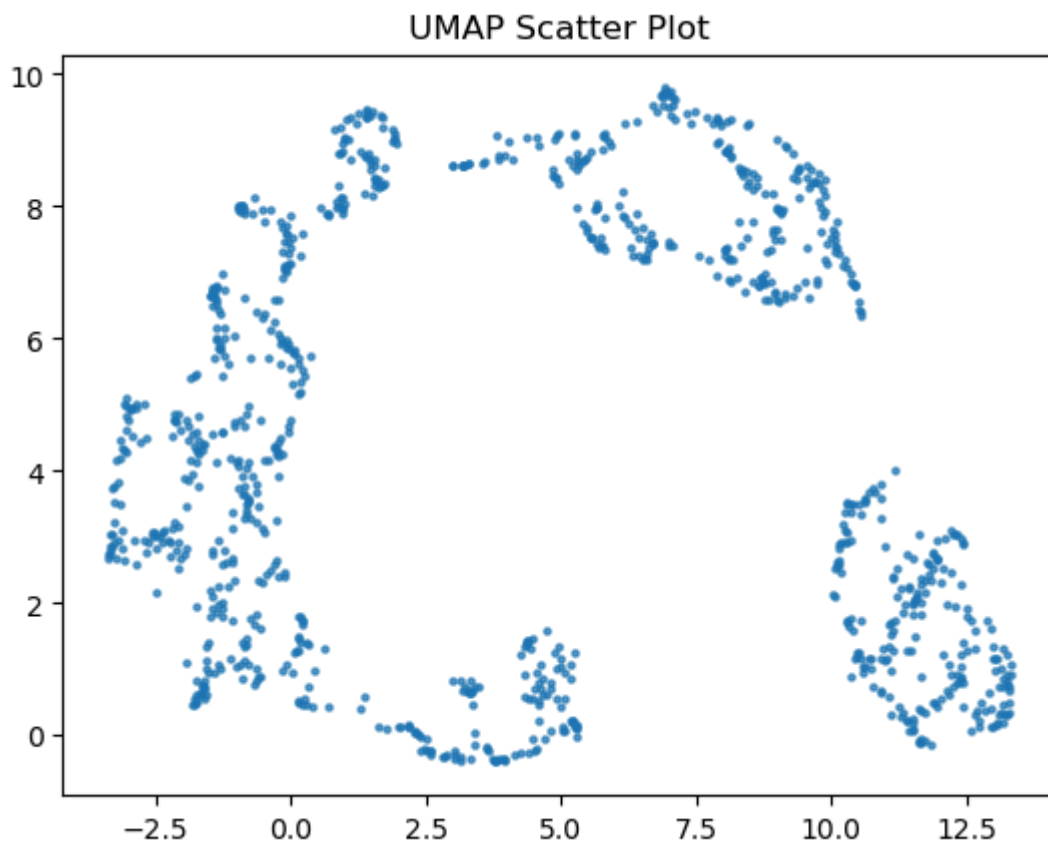
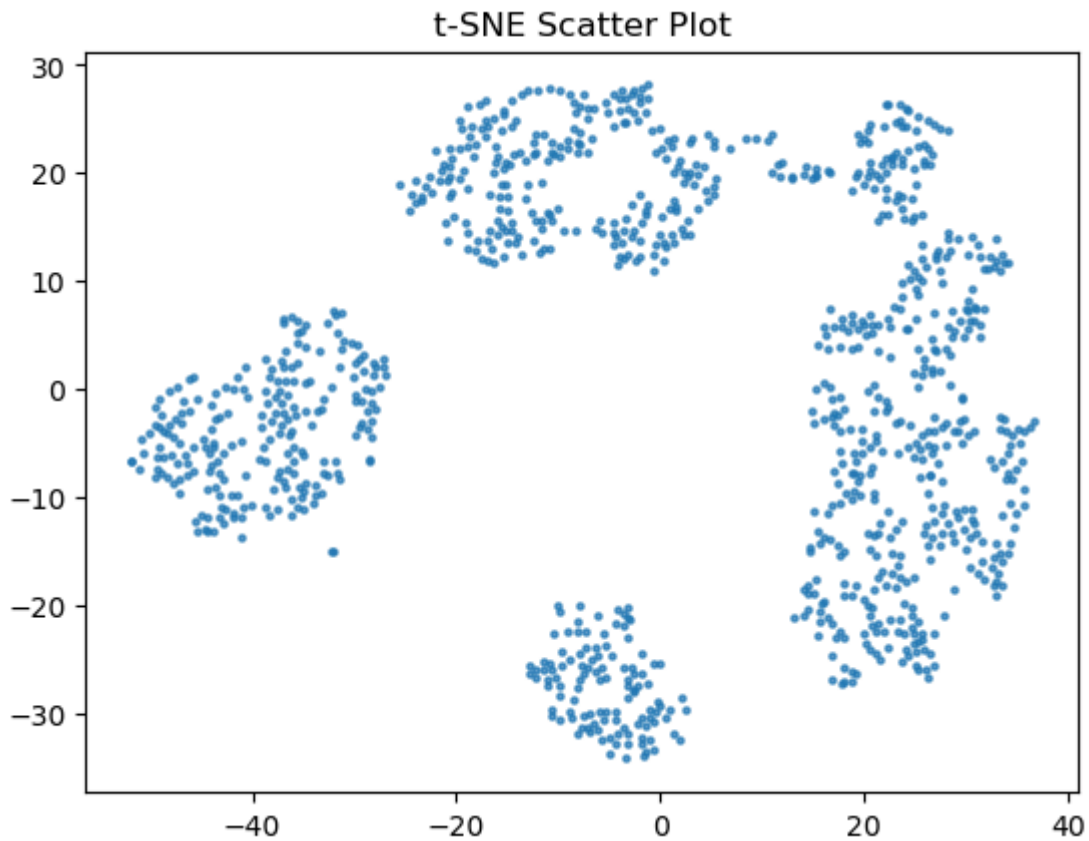For convenience, a detailed **"outline"** can be found in the notebook's outline.

Plots

1. PCA Scatter Plot:

PCA 2D Scatter Plot

2. UMAP (Uniform Manifold Approximation and Projection) Scatter Plot:

UMAP Scatter Plot

3. t-SNE (t-Distributed Stochastic Neighbour Embedding) Scatter Plot:

t-SNE Scatter Plot

Family Planning: Mean Children and Proportions

Mean number of children (Family Planning):	**1.7839**
Mean number of children (No Family Planning):	**4.912**
Proportion of families with Family Planning:	**0.3564**
Proportion of families without Family Planning:	**0.6436**