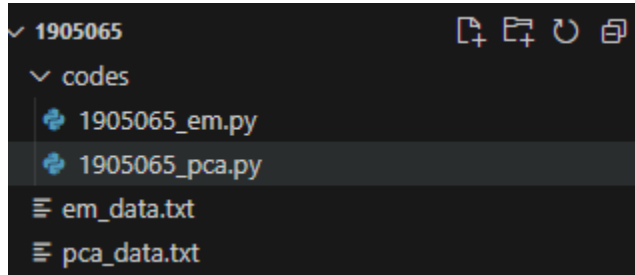


# CSE472: Machine Learning

**ID: 1905065**

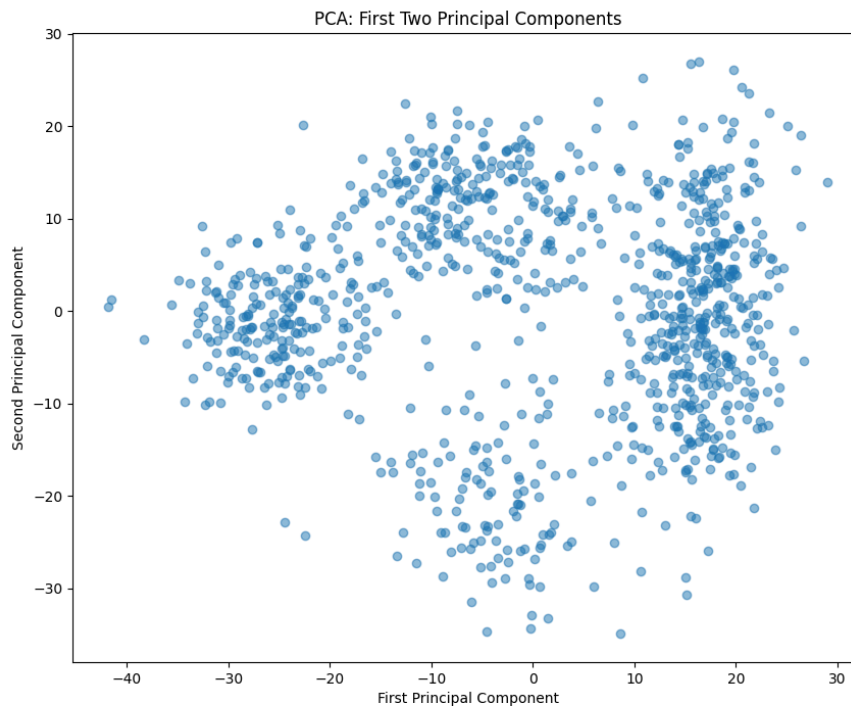
## Instruction to run the code:

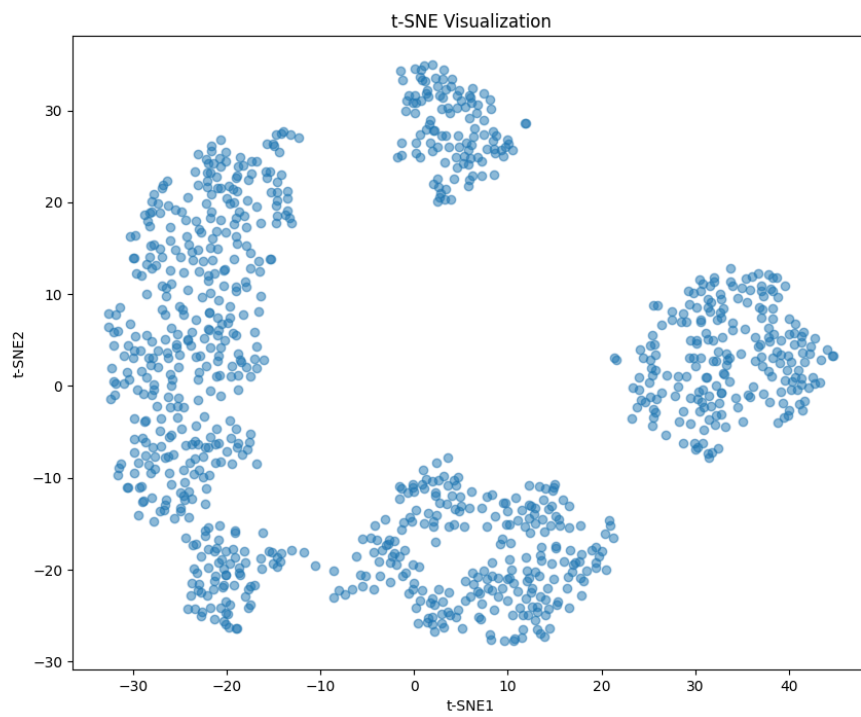
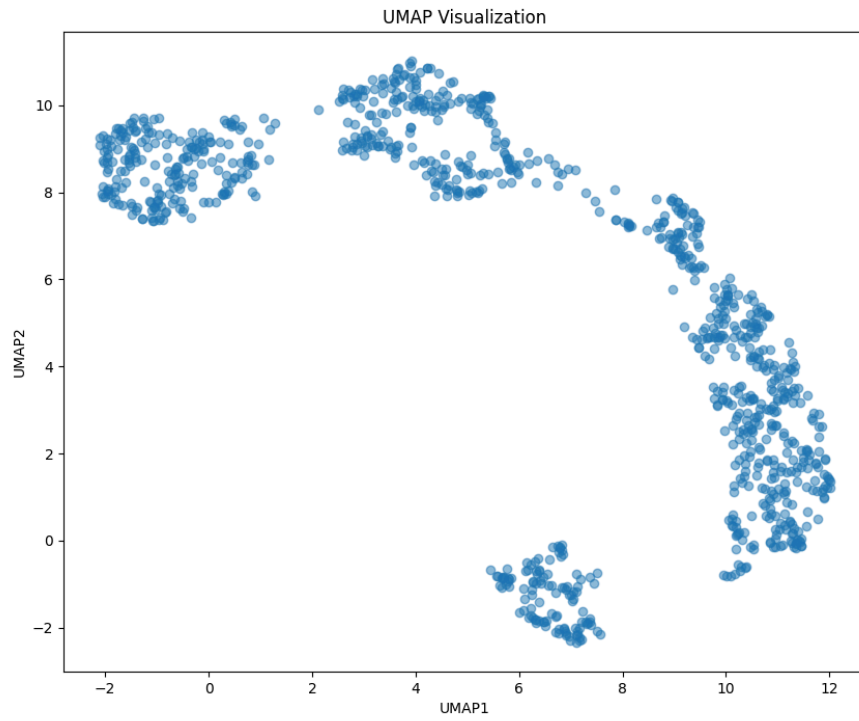
Need to put the data files in the parent directory of “codes” directory. The directory tree should look like this:



Then, run the command “python codes\1905065\_pca.py” or “python codes\1905065\_em.py”.

## PCA plots:





**EM Results(After 191 epoch, max\_itr=1000, tolerance= 1e-6):**

Mean number of children in families with family planning: 1.7824

Mean number of children in families without family planning: 4.9107

Proportion of families with family planning: 0.3560

Proportion of families without family planning: 0.6440