

1. Consider the `circle_data.csv`. This file contains clustered data point into two clusters. **In Python**, answer the following:
  - (a) (3 points) Using the `pandas` library, read the csv file and create a data-frame called `circles`.
  - (b) (5 points) Using the proper Python commands, visualize the data. Describe the plot.
  - (c) (5 points) Using the appropriate standardization formula, put all the variables on the same scale. Use the 0-1 transformation.
  - (d) (8 points) Using the `SpectralClustering` function, cluster the data into two cluster using 20 neighbors.
  - (e) (6 points) Visualize the data with cluster membership.