Project 1 Demo Description

Time: 10:30AM ~ 2:00PM, September 26, 2019

Location: 341 Davis Hall

A NEW data set (pca_demo.txt) has been posted on Piazza (under resource project1). The data format is the same as the ones we already provided (but with different numbers of rows/columns).

Please bring the following items to Demo:

- A hard copy of your report.
- Your laptop. Including your runnable code implementation, the downloaded new dataset (pca_demo.txt, making sure your code can read it correctly).
- Your UB card.

Complete the following tasks, and show your results during demo (please do NOT include these results in your report).

1. Run your Dimensionality Reduction methods (PCA, t-SNE and SVD) on new dataset (pca_demo.txt).
   Please show:
   a. PCA source code and visualization results on new dataset.
   b. t-SNE and SVD visualization results on new dataset.
2. Run your Association Analysis implementation on gene expression dataset with new queries. For example, set the support value to 60% and confidence value to 65%, then answer the query:
   asso_rule.template3("1or2", "BODY", "ANY", ['G1_Down'], "HEAD", 2)
   Note that these parameters and template will be changed during demo.
   Please show:
   a. Association Rule results (including rules and the number of rules) for new queries.
   b. Association Rule source codes.
3. You will be asked several questions to test your understanding about above methods.

Please note:
1. The demo is divided into three parts:
   a. Check Dimensionality Reduction methods ;
   b. Check Association Analysis method;
   c. Answer project-related questions.

2. During the demo, some questions will be asked to verify your understanding about the tested methods. Your final score is based on your report, your submitted code, your demo and your answers to those questions. Please make sure that your results in the report and shown in the demo part can be reproduced by your submitted code, or you may lose points.

3. Each group only has **5 minutes** to finish each part of the demo. We will **STOP** the demo part once time is up. Do not be late and make sure your code can run smoothly. We will **NOT** give extra time.

4. You should not reveal the questions you are asked during your demo to other groups. If we find this, we will give **ZERO** score for this project to all the members in your group and the groups that receive the information.