

HW4 Graph Clustering and PCA

Goals

In this assignment, you will use the python programming to implement the two data mining algorithm: graph clustering (spectral clustering) and PCA.

Problems

In this assignment, you will need to solve 4 problems. Please follow the instructions in the problem files.

- Problem 1: 30 points (10 points for each subquestion)
- Problem 2: 20 points (10 points for each subquestion)
- Problem 3: 20 points (10 points for each subquestion)
- Problem 4: 30 points (10 points for each subquestion)

Debugging your program using python unit tests (nosetests)

You can use the provided unit tests to debug your code. For example, to debug the code of your solution to problem 2, type:

```
nosetests test2.py
```

If the code is correct, you will pass the unit tests.

How to submit?

Please submit problem[1-2].py (python files) in Canvas system under “HW4 assignment”.