Data Mining, HW00
Due Date is On MyCourses
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Homework is to be programmed in python3, Java, or Matlab, *but prefer python3*.

Assume that the instructor has no knowledge of the language or API calls but can read comments.
Use prolific comments before each section of code, or complicated function call to explain what the code does, and why you are using it.

Hand in your results, and the commented code, in the associated dropbox.

Feel free to look over each other's shoulders, at each other's work, but do you own work.
Let me know whom you worked with. Do not hand in copies of each other's code.

Do not use single letter variable names. Do not use i, j, k as variable names. Things are going to get very confusing fast. Do not use variable names such as "index" or "count". Instead use descriptive variable names, with plenty of comments around them. "doughnut_idx", is the index of which doughnut you are using.

Submission Instructions:
Put all of your code in a directory with your name in it:
HW_00_YourLastName_YourFirstName, with the obvious substitutions.

1. The directory should contain:
   A. Your mentor program. Call it HW_00_YourLastName_YourFirstInitial_Mentor.py.
      The mentor program will create will create a file that must run. The file will be called:
      HW_00_YourInitials_Trained.py.

   B. The results of your mentor program.
      The file HW_00_YourInitials_Trained.py.

   C. Create a PDF file named HW_00_YourLastName_YourFirstName.pdf with a write-up in it.
      In this case it contains: your name, the results you get running your training program, and a conclusion about what you learned.

Here are the specifications for HW_00_YourInitials_Trained.py.
2. The mentor program must produce the trained program. (You get a zero if this does not work.)
3. It should be well commented, so it can be understood by the grader. (1)
4. The trained program, must compile and run and not crash. (1)
5. When run, the trained program must print your first name, and then your last name, on one line. (1)
6. The trained program, when run, must print out something interesting about you that you are willing to share.
   "I can juggle" "I can ride a unicycle", "I like to dance", "I know ASL." (1)
7. The trained program, when run, prints out the time and date it was *created*. (1)
8. Then the trained program must print out the *current* time and date. (2)
9. The trained program opens up a CSV file named "../A_DATA_FILE.csv". (2)
   Examining the table, the program must print the number of rows and columns in the CSV file, including any header row. HOWEVER, empty rows should be ignored, and empty columns should be ignored. You may need to do some pre-processing here.

   The supplied example file should produce the output:

```
columns:        4
rows:           7
```

   NOTE: The grader will use a different file then the one you were given. You might want to create your own test suites to be sure it works on other file sizes.

10. Conclusion: (1)
    Write a paragraph in your PDF file, containing at least four or five sentences that summarize what you learned.