Special Topics: Data Analytics and Visualization in Healthcare
CSCI-GA.3033-096 (19635)
Lab assignment 1

Using the dataset provided in week 2 (diabetes.csv) do the following in R or Python:

1. Show the first 15 rows of the dataset.
2. Show rows 15 to 25 with the column “BMI”.
3. Show rows 25 through 50 with the columns "Age" and "BMI”.
4. Show the systolic blood pressure (SBP) and BMI of female patients that are 65 or older.
5. Show the mean and standard deviation of the BMI of obese female patients (BMI 25.0 to <30).
6. Create histograms for Hemoglobin A1C (baseline and follow-up), SBP, and BMI.
7. Show the mean of the BMI of men who are obese (BMI over 30).
8. Show the total number of patients with normal blood pressure (systolic blood pressure less than 120 mm Hg).
9. Show the percentage of females with high blood pressure (SBP of 130 mm Hg or higher).
10. Build a bar chart of the number of patients by the blood sugar levels (normal, prediabetes, and diabetes) at baseline.
    - A normal A1C level is below 5.7%.
    - A level of 5.7% to 6.4% indicates prediabetes.
    - A level of 6.5% or more indicates diabetes.

Notes:

- This lab assignment is individual.
- Use the dataset provided in week 2 (diabetes.csv).
- Use R or Python to implement the problems. You are welcome to do the assignment in both R and Python.
- Submit the .R file and/or the .ipynb file.