**STAT 40001/STAT 50001 Statistical Computing Fall 2022**

**Lab-8**

1. Generate 500 random numbers from a standard normal distribution and display them using a histogram.
2. 1The National Highway System Designation Act was signed into law in 1995. It abolished the federal mandate of 55 mph speed limits. The data speed (provided in the Brightspace) shows percentage changes in interstate highway traffic fatalities from 1995 to 1996. Create the following graph as it is (please make sure the



1. All registered elevators in New York City are provided in the link below <https://www.kaggle.com/new-york-city/nyc-elevators/discussion/39528>

For your convenience the data are attached with this Lab-8 (NYC data)

1. Import the data in R.
2. Not all elevators are active. How many are currently active?
3. How many elevators are active in Manhattan borough?
4. Plot pdf of a standard normal distribution by generating data in (-4, 4).
5. Generate 100 random numbers from a normal distribution with mean 5 and variance 64.
6. Generate 100 random sample form each of the following distribution and draw their normal qq plots
7. Normal
8. Student’s t (use degree of freedom 20)
9. Exponential( Use rate=1)
10. Uniform