**ALY 6070 Communication/Visual Data Analytics**

**Assignment 4 : Signature Individual Essay**

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For our final project we have been given a dataset of 2015 NYC Street Tree Census, where me and my roommates has built the R Shiny and Tableau dashboards by analyzing and exploring the various parameters present in the given dataset. Each of us has made equal contribution for this assignment and I will now further discuss about my part and what way I have contributed in this Final Project.

For the first part of our assignment, we were told to use R Shiny. I have used R Shiny in order to find the problems that needs to be addressed by analyzing skills and its implementations by making use of the dashboarding skills. Also, we used this to find out if there is any sort of common connection between the detected problems and the trees.

I have made a plot for sidewalk vs guards using R Shiny as we can see below.

Chart, bar chart

Description automatically generated

To understand more about guards, tree guards are kind of a fence around the tree providing a sense of security to the tree from the harsh environment. They can help in the tree’s long life and good health. They are usually made to build in a metal format.

Point to be noted any tree guard should be made in such a way that it should let the water flow from the sidewalk flowing through the tree pit.

In the second part of the assignment, each one of the team members has created a tableau dashboard. In my dashboards, I have tried to visualize and plot the data columns in NYC dataset in the form of 6 graphs as we can see below. Below are some of the sample graphs that I have plotted and the entire dashboard that I contributed for this assignment using Tableau.

Graphical user interface, text, application

Description automatically generated

Graphical user interface, application, Excel

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Timeline

Description automatically generated

The first visualization depicts the total number of trees mapped by surveyors across NYC within various boroughs. The second graph has been plotted to learn the distribution of the DBH of the living trees. In the third graph, I have plotted the citywide tree DBH count by taking the boroughs on the X-axis and Y-axis has the count of tree DBH. Fourthly, I have made a visualization of most vs least number of trees with respect to the zip city. Finally, the fifth graph, is a geospatial representation to determine the diameter of a tree w.r.t. the location. In this dashboard analysis each tree has been effective as a data point and each tree that has been surveyed played an important role for our dashboarding using R Shiny and Tableau (they are very interactive, and it also has drop down menus, which also has slider bars so that we can input values as per our preferences) which helped in further analysis.