Instructions

> **Instructions**
>
> - This homework assignment is worth 44 points.
>
> - Please submit a **.twb** file for each exercise to Blackboard.
>
> - **Please strive for clarity and organization.**
>
> - **Due Date: February 16, 2024 by 11:59 pm.**

Exercise 1

For this exercise, we will use the `insurance.csv` data file. This file contains basic demographic information on customers.

(a) (3 points) Load the `insurance.csv` data file.

(b) (6 points) A common hypothesis is that smokers insurance premium is higher than non-smokers. Create an appropriate visualization that test this hypothesis. Comment on your findings.

(c) (6 points) Another common hypothesis is that the older you are the higher insurance premium. Create an appropriate visualization that test this hypothesis. Comment on your findings.

Exercise 2

The data set contains 3 classes of 50 instances each, where each class refers to a type of iris plant.

(a) (3 points) Load the `iris.csv` file to tableau.

(b) (5 points) Create a visualization that shows the species with longest petal length (on average). Comment on your findings.

(c) (5 points) Is there any relationship between `Petal Width` and `Sepal Width`? Create a visualization that explores the relationship between them. Comment on your findings.

Exercise 3

Crime incident reports are provided by Boston Police Department (BPD) to document the initial details surrounding an incident to which BPD officers respond. This is a dataset containing records from the new crime incident report system, which includes a reduced set of fields focused on capturing the type of incident as well as when and where it occurred. Each row represents a crime report, including: the type of crime, date and time, and location.

(a) (3 points) Load the `crime.csv` file to tableau.

(b) (5 points) Using the appropriate visualization answer the following: What types of crimes are most common? Comment on your findings.

(c) (8 points) Using the appropriate visualizations answer the following: Does the frequency of crimes change from day to day? week? year? That is, what day of the week has the highest number of crimes? what weeks of the year have the highest number of crimes? what year has the highest number of crimes? Comment on your findings.

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[1]Make sure you submit `*.twb` files in Blackboard.