HW02

Due: Monday Sep 23 at 11:59 pm

Submit your solution as a **TABLEAU PACKAGED WORKBOOK (.twbx)** format on Blackboard

In this assignment you will learn how to do basic data preparation tasks in Tableau and generate graphs. You have been provided with data summarizing the number of medical cases attended by physicians in five different divisions at a hospital. The hospital EMR system generates an annual summary that reports that number of cases attended by a physician per month. The hospital reports for 5 years (2014-2018) are available in the excel worksheet "Hospital Data.xlsx". The worksheet includes annual reports in sheets labeled 2014-2018. Each sheet has a column that lists the physician ID and position (I=fellows, and II=attending), and the number of cases they attended per month. The first column in the report has the physician ID listed along with their position as follows: xxx-XX, where xxx is the ID and XX represent their position (fellows or attending). You will need to split this value to generate separate fields for Physician ID and position. Note that the hospital division in the reports is abbreviated using letters A-E, while the specialty represented by each letter is defined in the sheet call division. Your task is to generate visualizations that will help the hospital administration answer questions related to how many medical cases are processed per year per division, and how the workload is distributed across fellows and attendings. To accomplish this, you will have to connect to the data, utilize Tableau's data interpreter to clean the data and format it as needed using data preparation features such table unions and joins, and functions such as split, pivot, etc.

Answer the following questions:

1. A line chart illustrating the trend of the number of cases per year for each hospital division over the period 2014-2018.
2. A bar chart illustrating the total number of cases attended within each division over the period 2014-2018, with a break-up of the number of cases attended by fellows and attendings encoded in color. Which divisions has the largest number of cases attended. Include a filter that allows visualization of the data for all years or allows a selection of one or more years.
3. Create a table of the number of physicians in each Division (Specialty).
4. A bar chart showing the Top 10 performing physicians based on the number of cases attended. The bar chart should use color to encode the physicians' position (I or II).
5. Create a line chart that shows the number of cases attended per month over the period 2014-2018. Is there a month that is slow is terms of the medical cases seen by physicians? Include a filter that allows you to see the monthly trends per division.