**Lab 7**

**Adding Interactivity**

In this lab, you will learn how to add interactivity to Tableau using quick filters and stories.

**Video**

<http://www.tableausoftware.com/learn/tutorials/on-demand/dashboard-development>

<http://www.tableausoftware.com/learn/tutorials/on-demand/authoring-interactivity>

<http://www.tableausoftware.com/learn/tutorials/on-demand/Story-Points>

**Practice**

* Connect to the US state dataset in Tableau.
* Create the following three graphs:
  + **Create a scatterplot of 2010 GDP per capita vs Human Development Index.**
    - Color each mark by geographical region.
    - Add reference lines for the average values of each variable.
  + **Create a barchart of 2010 GDP per capita by state.**
    - Order the bars to make the chart readable.
  + **Create a choropleth map of 2010 GDP per capita by state.** 
    - Create three quick filters:
      * A multiple values list for geographical region.
      * A slider for 2010 GDP.
      * A slider for 2010 GDP per capita.
* Place the three above graphs (scatterplot, barchart, and choropleth map) in a new dashboard called ‘Practice’.
  + Set up the dashboard so that the quick filters applied on the map will change the states shown on the barchart but will NOT change the scatterplot.
* Develop a five-point story about the US states using story points.
  + The story should look deeper into 2010 GDP per capita.
  + Remember the principles of a statistical narrative as discussed in class (simple, seamless, informative, true, contextual, etc..)

**Assignment**

**Due Date: March 2, 2018, 6:00 pm. Value: 10 points**

* Connect to the US state dataset in Tableau.
* Create the following three graphs:
  + **Create a scatterplot of 2010 GDP vs Human Development Index.**
    - Color each mark by geographical region.
    - Add reference lines for the median values of each variable.
  + **Create a barchart of 2010 GDP by state.**
    - Order the bars to make the chart readable.
  + **Create a choropleth map of 2010 GDP by state.** 
    - Create three quick filters:
      * A multiple values list for geographical region.
      * A slider for 2010 population.
      * A slider for 2010 human development index.

(4 pts.)

* Place the three above graphs (scatterplot, barchart, and choropleth map) in a new dashboard called ‘Exercise 1’.
  + Set up the dashboard so that the quick filters applied on the map will change the states shown on the barchart but will NOT change the scatterplot.

(1 pts.)

* Develop a five-point story about the US states using story points. This story should explore the relationship between variables, or look at individual variables in greater depth.
  + You may use any visualizations created for previous labs, or create new ones.
  + Incorporate least 3 different plots (some of your story points may use the same plots with different quick filter settings).
  + Remember the principles of a statistical narrative as discussed in class (simple, seamless, informative, true, contextual, etc...)
  + **Save this story in a safe place as you will reuse it in the next lab!**

(5 pts.)

* **Save the dashboard and five-point story as a Tableau Packaged Workbook file (.twbx) and submit it on canvas. Do not include the charts from the practice portion of the lab in your submission.**