

## Homework #4

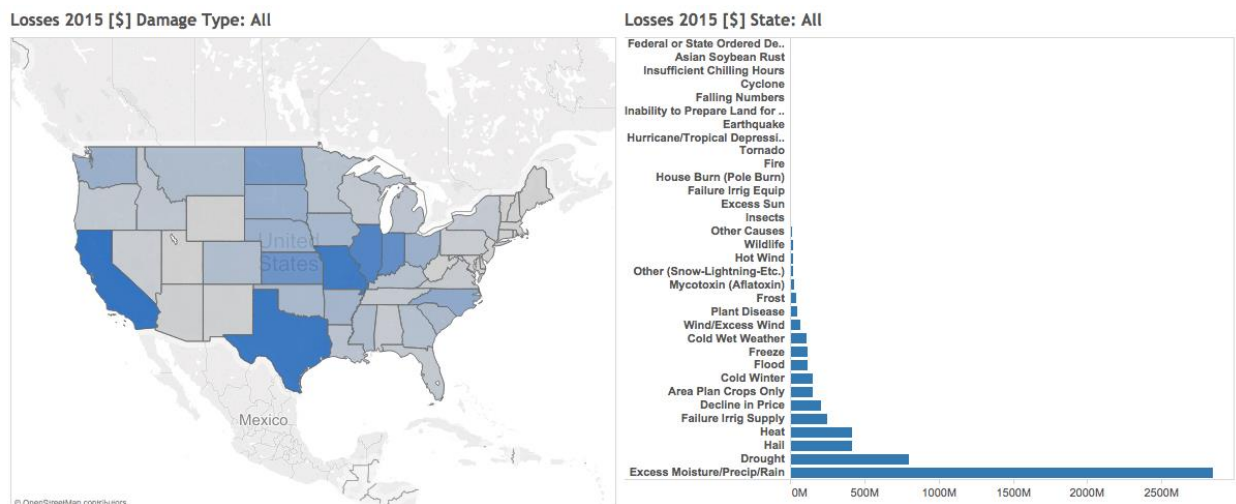
due Wednesday, October 10 (end of class)

### THIS IS A SIMILAR ASSIGNMENT AS HMW#3 BUT YOU NEED TO USE D3

Create an interactive visualization system to explore the cause of loss indemnities dataset for 2015 available at <http://www.rma.usda.gov/data/cause.html>. A corresponding cleaned data file is provided in Blackboard – “*losses2015\_transformed.csv*”. You are asked to create an **interactive multiform visualization system in D3**. For your reference, a working system developed in Tableau can be accessed at the following URL

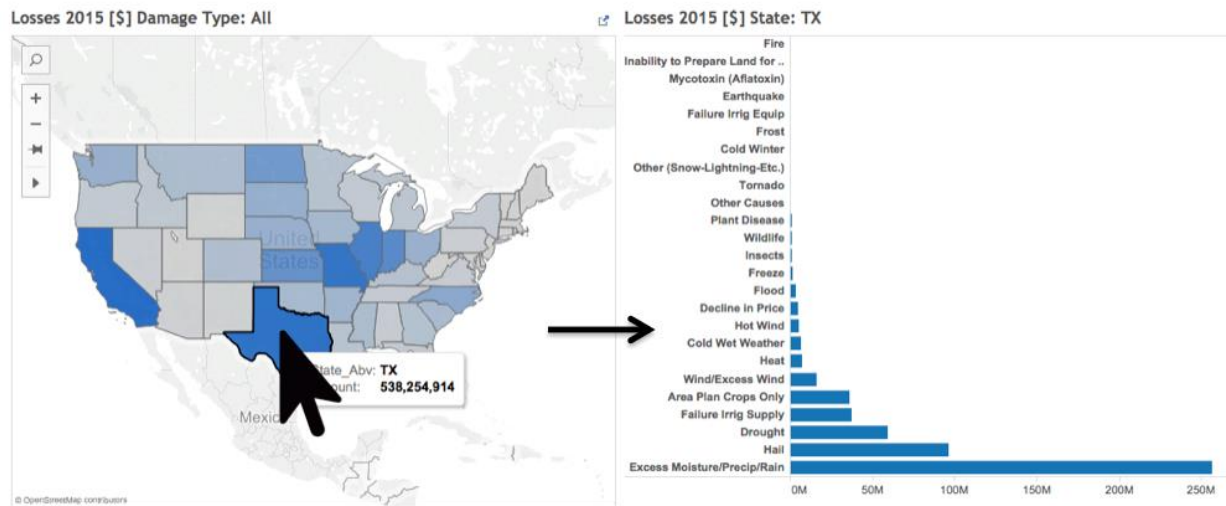
<https://public.tableau.com/profile/gabriel.terejanu#!/vizhome/USDALosses2015/Dashboard>.

The visualization system should contain two views: (1) a choropleth map on the left that shows state boundaries and uses a sequential segmented colormap to encode the total amount of losses, and (2) a bar chart on the right that expresses the amount of loss with aligned horizontal position and separates the damage type with vertical position. The marks are ordered by the loss amount attribute that encodes the size of the bar. When no interaction is available the entire data set is used to generate the two views. Namely the colormap encodes the sum aggregated losses of all types of damage and the bar chart encodes the sum aggregated losses for all the states, see below.



The following two data files are provided: **us-10m.json** – containing state boundaries, and **losses2015\_transformed.csv** – containing the 2015 indemnities per state.

**Interaction and linked views:** When the user hovers over a state on the left view then the bar chart will show only the data related to that state. Aggregation of losses is no longer over the entire US, rather it is only over the highlighted state (e.g. TX) – see below.



**What to submit? A link to your GitHub repository that contains the following files:**

- index.html* – the web page used to access your visualization
- Any data files that you have generated in addition to two data files provided.

**Please submit your GitHub link via Canvas.**

(Git tutorial: <http://rogerdudler.github.io/git-guide/>)

### Graduate & Honors Students

You are required to create an additional interaction. Namely when the user hovers over a bar corresponding to a specific type of damage then the map encodes only the data related to that damage. Aggregation of losses is no longer over all damage types, rather it is only over the highlighted damage (e.g. Drought) – see below.

