CSCI 4905/6905: Data Visualization and Communication
Fall 2021
Homework 5 – Choose an effective visual
Due Sunday, November 21, at 11:59 PM

1. **How would you show this data? (60 pts):** The following table shows attrition rate for a 1-year associate training program for a given company. Spend a moment familiarizing yourself with it, then answer the following questions. Note: This is Exercise 2.5 from *Storytelling with Data: Let's Practice!*.

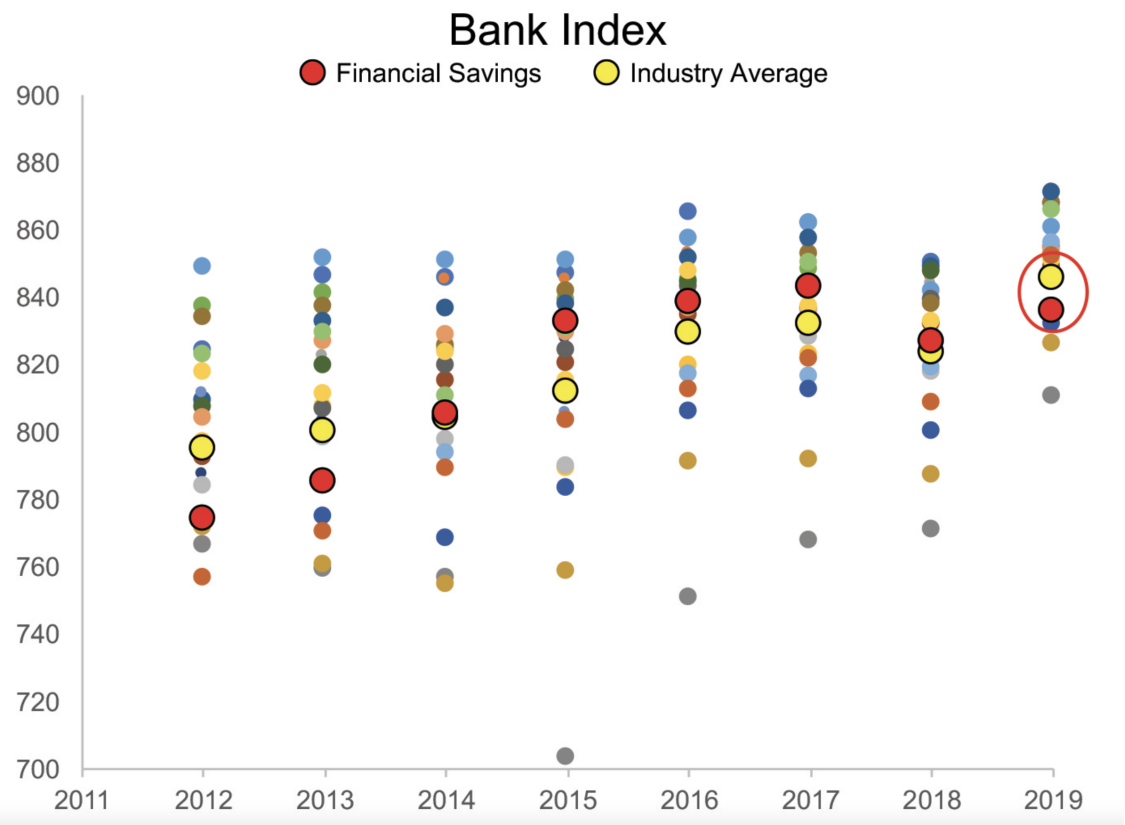
Year	Attrition rate
2019	9.10%
2018	8.20%
2017	4.50%
2016	12.30%
2015	5.60%
2014	15.10%
2013	7.00%
2012	1.00%
2011	2.00%
2010	9.70%
AVG	**7.50%**

   a How many different ways can you come up with to show this data? Draw or create in the tool of your choice.

   b How would you show the average in the various views you've created?

   c Which of the visuals you've created do you like best and why?

2. **Critique (40 pts):** Let's critique a less than ideal graph. The figure below is a dot plot showing the bank index over time for a number of national banks. Assume you work at Financial Savings. Note: This is Exercise 2.7 from *Storytelling with Data: Let's Practice!*.



a What questions do you have about this data?

b If you were designing the graph, what changes would you make? How would you visualize this data? Note: To extract the values for the points in this graph, you can use the WebPlotDigitizer tool. Alternatively, you can download the data from the book's Google Drive (e.g., data for Exercise 2.7).

Extra credit (10 pts): The source code for (almost) all of the visualizations in *Fundamentals of Data Visualization* is available in Canvas (in the **Fundamentals of data visualization – source code** module). Pick five new visualizations (i.e., visualizations that neither you nor your classmates have worked on). Indicate which figures you're working on, by responding to the post in Canvas – first come, first serve. Use different data set(s) to represent the main message of those visualizations, and describe these new visualizations.

Submit

Submit a) your responses, b) the R scripts used to help in answering the questions and to generate the plots, and c) each figure generated (in PDF format). Combine all these files into a ZIP archive, and submit it to Canvas.