**Week by week**

In week one you will be introduced to the principles of data visualization. This week’s assignment asks that you carefully read Alberto Cairo's work, Graphics Lies, Misleading Visuals. You will locate and identify a visual that displays misleading information. You will interpret the features of the visual in order to identify the mechanism(s) that is/are used by the "encoder" to mislead the "decoder." For each mechanism that you identify, you will explain how it was used to mislead.

In week two you will delve into basic charting. For this week’s assignment, you will work with real world CSV weather data. You will manipulate the data to display the minimum and maximum temperature for a range of dates and demonstrate that you know how to create a line graph using matplotlib. Additionally, you will demonstrate procedure of composite charts, by overlaying a scatter plot of record breaking data for a given year.

In week three you will explore charting fundamentals. For this week’s assignment you will work to implement a new visualization technique based on academic research. This assignment is flexible and you can address it using a variety of difficulties - from an easy static image to an interactive chart where users can set ranges of values to be used.

In week four, then everything starts to come together. Your final assignment is entitled “Becoming a Data Scientist.” This assignment requires that you identify at least two publicly accessible datasets from the same region that are consistent across a meaningful dimension. You will state a research question that can be answered using these data sets and then create a visual using matplotlib that addresses your stated research question. You will then be asked to justify how your visual addresses your research question.