Chapter 2: Data Visualization

**This week covers Sections 2.1 - 2.7**

## 2.1.1 Components of the grammar

What is a geom? How is it used in a visualization?

What is an aes? How is it used in a visualization?

What are aesthetics associated with? i.e. How are they assigned to different aspects of a plot?

## 2.1.2 The gapminder data

What does each row of the gapminder data correspond to?

What geom is used in Figure 2.1?

What aesthetics are used in Figure 2.1?

## The **ggplot2** package

What are the required inputs for the ggplot() function?

What symbol is used to add layers to a ggplot?

## 2.2 5NG

What are the five key named graphs?

## 2.3 Scatterplots

What does the data = argument of the ggplot() function do?

What does the mapping = argument of the ggplot() function do?

What does the aes() function do?

What does the + between the two lines (ggplot() and geom\_point()) do?

What plot do you get when you don’t include geom\_point()?

### 2.3.2 Overplotting

How can you change the transparency of points?

What is the difference between geom\_point() and geom\_jitter()?

## 2.4 Linegraphs

What geom do you use to make a linegraph?

## 2.5 Histograms

How are bins used in a histogram?

What does the height of each bin represent?

What geom do you use to make a histogram?

How many bins are chosen by default?

What are two ways you can adjust the number of bins in a histogram?

## 2.6 Facets

What is a facet?

How do you include facets in a visualization?

## 2.7 Boxplots

What are the five numbers used to create a boxplot?

What geom do you use to make a boxplot?