## Boxplots, histograms, and density plots, oh my!

February 6, 2018

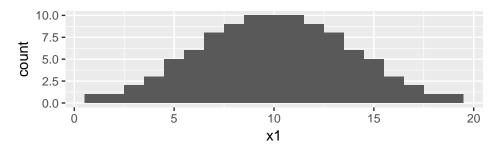
Here are some box (and whiskers) plots of four different data sets:

```
ggplot(data = example_data, mapping = aes(x = "Data Set 1", y = x1)) + geom_boxplot()
   15 -
 ¥ 10 -
    5 -
                                   Data Set 1
ggplot(data = example_data, mapping = aes(x = "Data Set 2", y = x2)) + geom_boxplot()
   15 -
 Ŋ 10-
                                   Data Set 2
                                      Х
ggplot(data = example_data, mapping = aes(x = "Data Set 3", y = x3)) + geom_boxplot()
   15 -
♥ 10-
    5 -
                                   Data Set 3
ggplot(data = example_data, mapping = aes(x = "Data Set 4", y = x4)) + geom_boxplot()
   15 -
 ¥ 10 -
    5 -
                                   Data Set 4
```

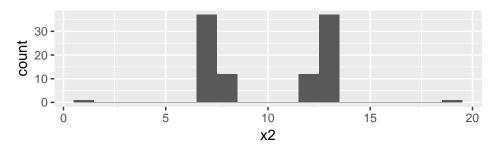
What can you tell me about the distributions based on these box plots? Shape? Outliers? Anything else?

Here are some histograms of the same data:

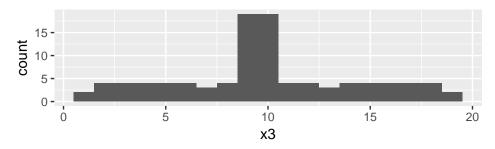
```
ggplot(data = example_data, mapping = aes(x = x1)) + geom_histogram(binwidth = 1)
```



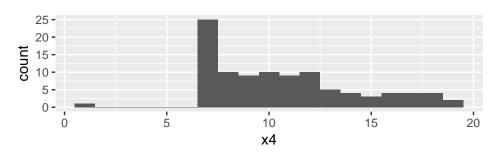
ggplot(data = example\_data, mapping = aes(x = x2)) + geom\_histogram(binwidth = 1)



ggplot(data = example\_data, mapping = aes(x = x3)) + geom\_histogram(binwidth = 1)



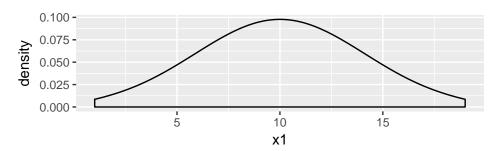
ggplot(data = example\_data, mapping = aes(x = x4)) + geom\_histogram(binwidth = 1)



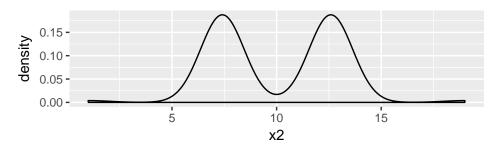
What can you tell me about the distributions based on these histograms? shape? outliers? Anything else?

Here are some density plots of the same data:

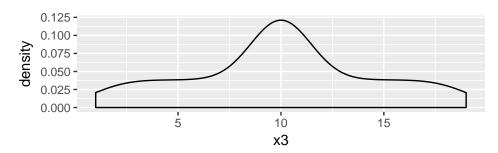
ggplot(data = example\_data, mapping = aes(x = x1)) + geom\_density()



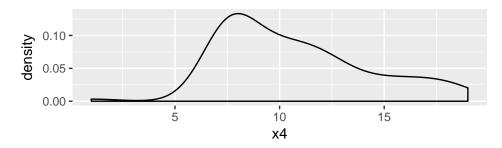
ggplot(data = example\_data, mapping = aes(x = x2)) + geom\_density()



ggplot(data = example\_data, mapping = aes(x = x3)) + geom\_density()



ggplot(data = example\_data, mapping = aes(x = x4)) + geom\_density()



What can you tell me about the distributions based on these density plots? **shape? outliers?** Anything else?