

# Intro to R for Epidemiologists

## Lab 10 (3/26/15)

### Part 1. Scatterplot of Sepal.Length and Petal.Length

Recreate the plot from Part 2 of lab 9 using `ggplot` using the following code from the posted solutions:

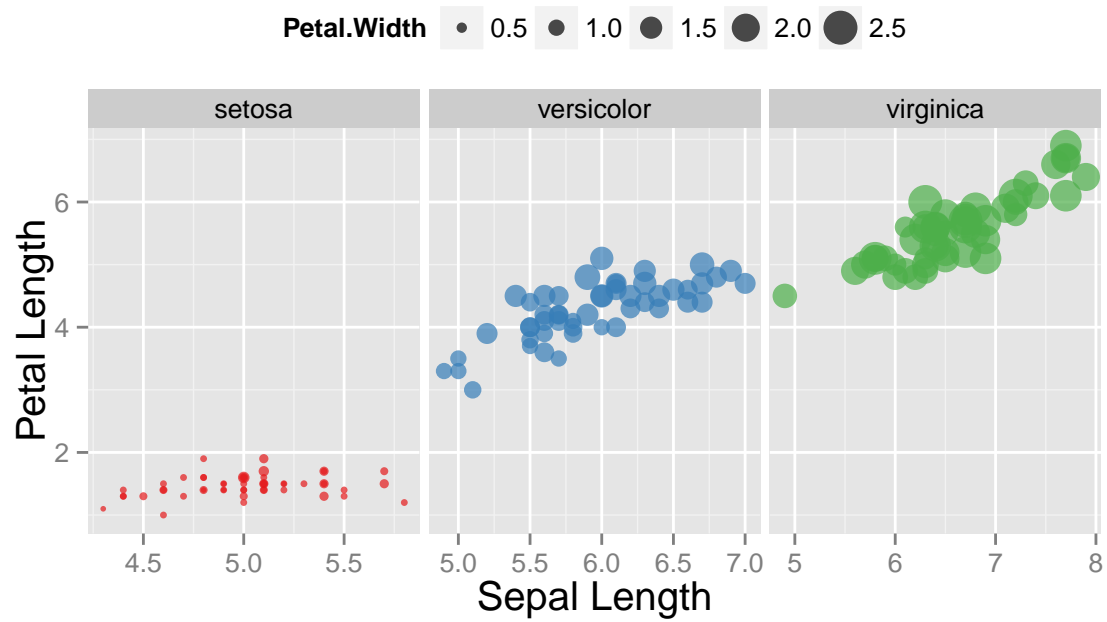
```
data(iris)
g1 <- ggplot(iris, aes(Sepal.Length, Petal.Length, color = Species,
  size = Petal.Width)) +
  geom_point(alpha = I(0.7)) +
  ggtitle("Petal Length vs. Sepal Length") +
  xlab("Sepal Length") + ylab("Petal Length") +
  facet_wrap(~ Species, scales = "free_x")
```

Add the following features to your plot:

- Increase the size of the plot title and the axes titles.
- Specify the color of the points using the “Set1” RColorBrewer palette.
- Remove the legend for the species type (Hint: Look at the `guide` option in `scale_color_manual`)
- Move the legend for petal width to the top of the plot.

```
#Change the size of main and axes titles
g1 + theme(plot.title = element_text(size = 20)) +
  theme(axis.title.x = element_text(size = 15)) +
  theme(axis.title.y = element_text(size = 15)) +
#Set color and remove color legend
scale_color_brewer(palette = "Set1", guide = FALSE) +
#Move legend to the top
theme(legend.position = "top")
```

# Petal Length vs. Sepal Length



*#Note: if you use theme(title = ...), this will also change  
# the size of the text in the legend*

## Part 2. Confidence Intervals

Recreate the plot from Part 3 of Lab 9 using `ggplot` using the following code from the posted solutions:

```
load("OR_df.RData")
g2 <- ggplot(OR_df, aes(x = Variable, y = OR, color = Variable)) +
  geom_point(size = 3, shape = 20) +
  geom_errorbar(aes(ymin = LB, ymax = UB), width = 0.3) +
  ggtitle("Associations between covariates and diabetes") +
  ylab("Odds ratio") + xlab("Covariates")
```

Add the following features to your plot:

- Remove the legend.
- Remove the tick marks on the x-axis.
- Remove the grey background
- Remove the grid lines
- Specify the color of the confidence intervals using the “Dark2” Brewer palette.

```
#plot
#Remove grey background
g2 + theme_bw() +
  # Remove legend and tick marks
  theme(legend.position = "none", axis.ticks.x = element_blank()) +
  #Remove guides
  theme(panel.grid = element_blank()) +
  #Specify color
  scale_color_brewer(palette = "Dark2")
```

