

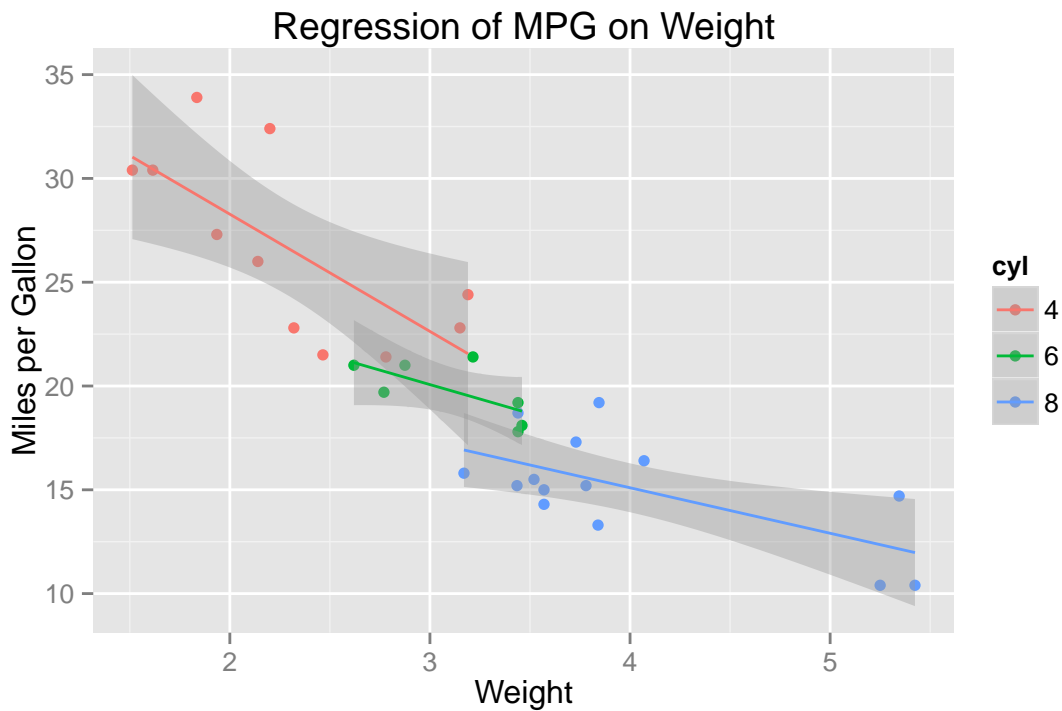
Intro to R for Epidemiologists

Lab 9 (3/19/15)

Part 1. MPG vs. Weight in mtcars dataset

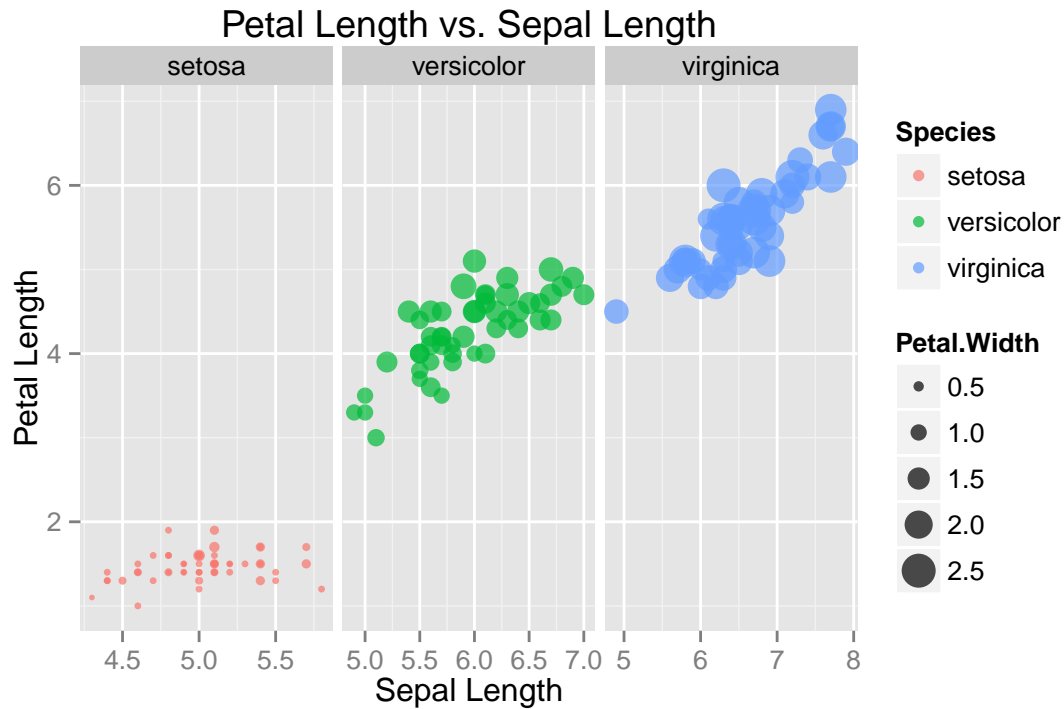
The `mtcars` dataset in the `datasets` package contains fuel consumption and 10 aspects of automobile design and performance for 32 automobiles (1973-74 models) from the 1974 Motor Trend magazine. Look at the help file for the `mtcars` dataset (`?mtcars`). The variables that will be used are as follows: `mpg` (miles/gallon), `cyl` (number of cylinders), and `wt` (weight lb/1000).

Using either `qplot()` or `ggplot()`, create a scatterplot of miles per gallon on weight colored by the number of cylinders. Add separate fitted lines to the plot corresponding to the number of cylinders. Note: you will need to convert the variable `cyl` to a factor.



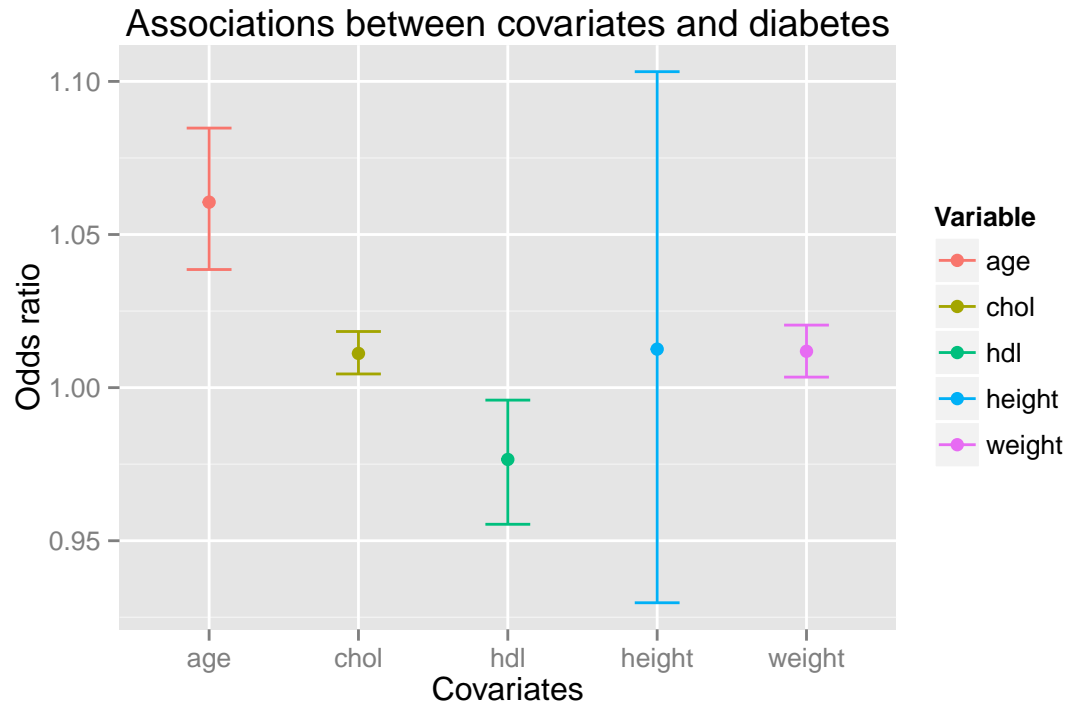
Part 2. Scatterplot of Sepal.Length and Petal.Length

With the `iris` dataset in R, create a scatterplot of petal length vs. sepal length separately for each species using either `qplot()` or `ggplot()`. Use different colors for each species and let the size of each point denote petal width. Set `alpha=0.7` to reduce the effects of overplotting. Note: you may need to change the argument `scales` in the `facet_wrap` function to allow the x-axis to vary between plots (see `?facet_wrap`).



Part 3. Confidence Intervals

The dataset `OR_df.RData` contains the odds ratios and corresponding confidence intervals from Lab 8. Use the `OR_df` data frame to create the plot below displaying the odds ratios and corresponding confidence intervals.



Part 4. Boxplot of sepal width by species

Use the `iris` dataset in R to create notched boxplots of sepal width by species. Make each box a different color. To color the interior of the boxplots, specify the `fill` argument instead of `colour`. Note: to create notched boxplots, you may want to consult the help page for `geom_boxplot` (`?geom_boxplot`).

