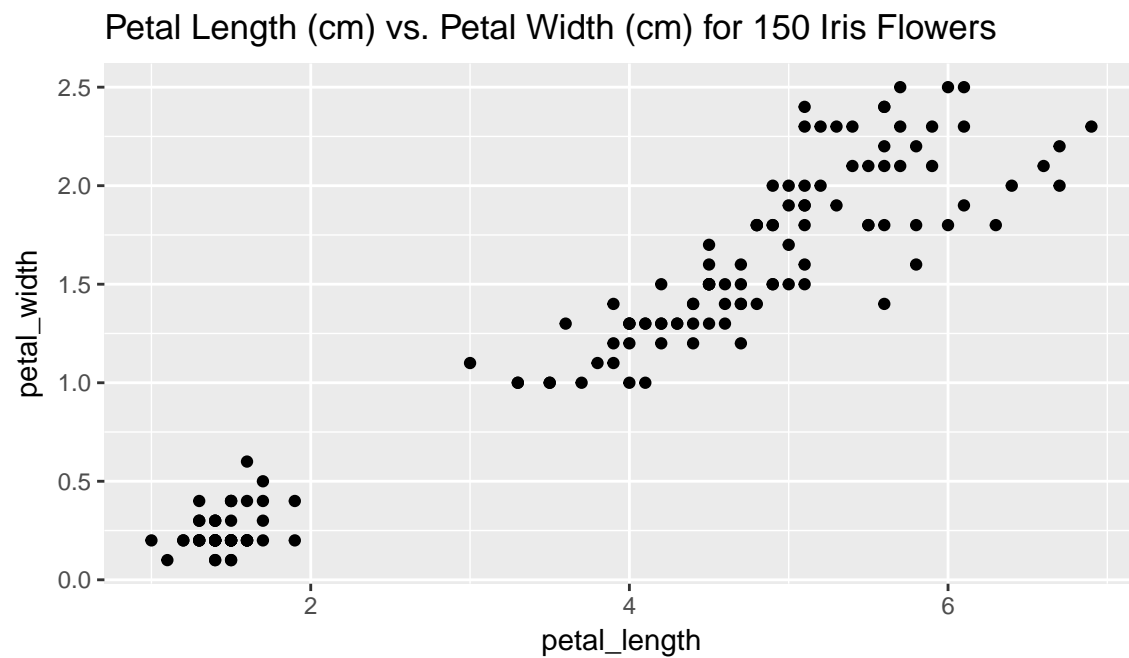# Scatter Plots and Correlation: Example

Today's example: Iris flower measurements

Figure 1: Iris flower (image source: Wikipedia)

1. Based on the plot below, what are the observational units, variable(s), and variable type(s) in this data set?

2. What did the code I used to make the plot look like? (note the data are in a data frame named `iris`)

Describe the relationship. . .

3. Describe the shape of the relationship between these variables

4. Are there any gaps or outliers?

5. Would it be appropriate to use the correlation to summarize the strength and direction of the relationship between these variables? Why or why not?

In case you answered "yes" to problem 5, you may use the following R output in answering the questions below:

```
iris %>%
  select(petal_length, petal_width) %>%
  cor()
```

```
##              petal_length petal_width
## petal_length    1.0000000   0.9628654
## petal_width     0.9628654   1.0000000
```

6. Describe the strength of the relationship between these variables, specifically referencing the scatter plot and the correlation if appropriate.

7. Describe the direction of the relationship between these variables, specifically referencing the scatter plot and the correlation if appropriate.