

Lab 0 - Hello R!

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Load Packages

```
library(tidyverse)
library(datasauRus)
```

Exercise 1

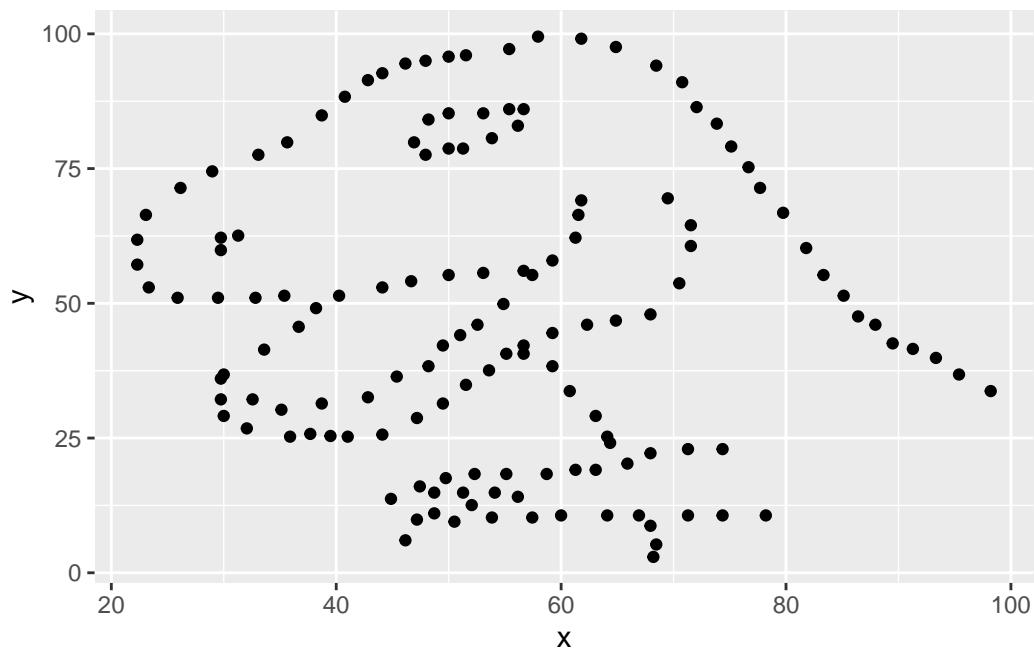
The `datasaurus_dozen` file has 1846 rows and 3 variables: 1) the dataset, 2) x-values, and 3) y-values.

Exercise 2

(The answer for this exercise is given below, but you should clean up the narrative so it only includes what you want to turn in.)

First, let's plot the data in the dino dataset (we will cover **ggplot2** in much more depth next week):

```
dino_data <- datasaurus_dozen %>%
  filter(dataset == "dino")
ggplot(data = dino_data, mapping = aes(x = x, y = y)) +
  geom_point()
```



```
dino_data |>
  summarize(r = cor(x, y))
```

```
# A tibble: 1 x 1
      r
  <dbl>
1 -0.0645
```

Next calculate the correlation between x and y in this dataset.

```
dino_data %>%
  summarize(r = cor(x, y))
```

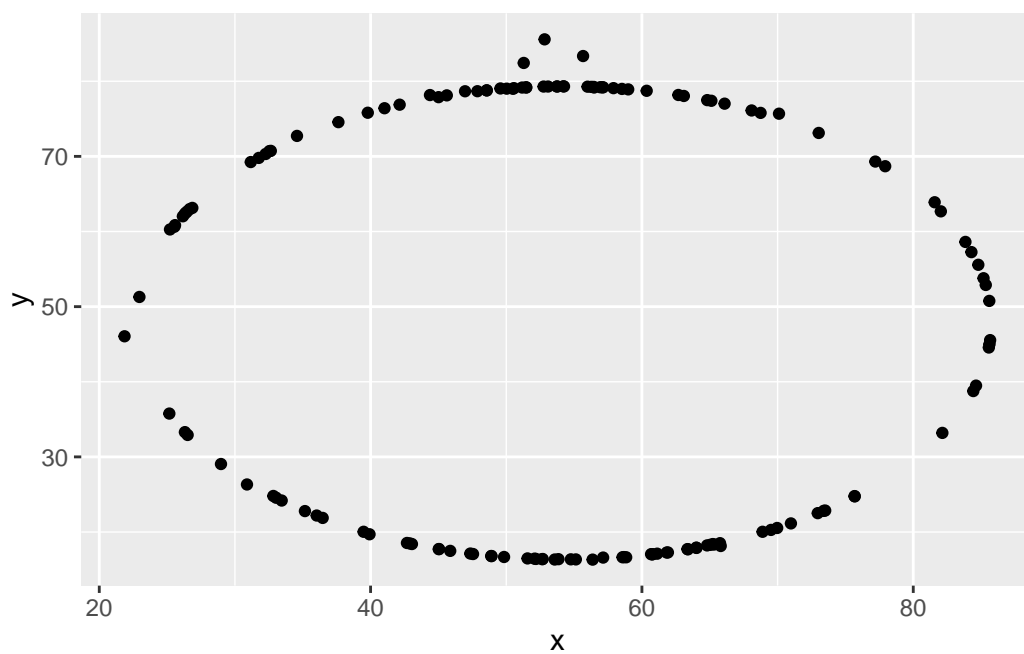
```
# A tibble: 1 x 1
      r
  <dbl>
1 -0.0645
```

Exercise 3

(Add code and narrative here as needed. Note the code chunks below are labeled with `plot-circle` and `cor-circle` to provide spaces to place the code for plotting and calculating the correlation coefficient.)

(When you have finished, delete these instructions.)

```
circle_data <- datasaurus_dozen %>%  
  filter(dataset == "circle")  
ggplot(data = circle_data, mapping = aes(x = x, y = y)) +  
  geom_point()
```



```
circle_data |>  
  summarize(r = cor(x, y))
```

```
# A tibble: 1 x 1  
      r  
  <dbl>  
1 -0.0683
```

Some more narrative can go here.

```
circle_data %>%  
  summarize(r = cor(x, y))
```

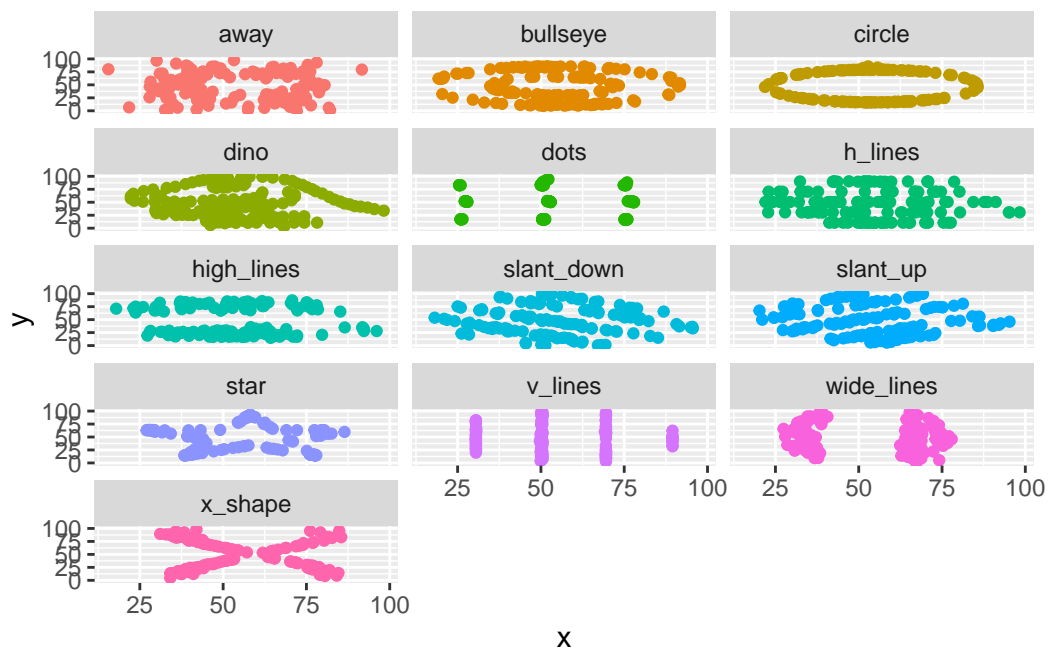
```
# A tibble: 1 x 1  
      r  
  <dbl>  
1 -0.0683
```

Conclude with some more narrative, if needed.

Exercise 4

(Add a labeled code chunk and narrative here. Insert code chunks using the “insert chunk” button (a green C with a +). Alternatively, use CMD + OPTION + I (Mac) or CTRL + ALT + I (Windows).)

```
ggplot(datasaurus_dozen, aes(x = x, y = y, color = dataset))+  
  geom_point()+  
  facet_wrap(~ dataset, ncol = 3) +  
  theme(legend.position = "none")
```



```
datasaurus_dozen |>
  group_by(dataset) |>
  summarize(r = cor(x, y))
```

```
# A tibble: 13 x 2
  dataset      r
  <chr>      <dbl>
1 away      -0.0641
2 bullseye   -0.0686
3 circle     -0.0683
4 dino       -0.0645
5 dots       -0.0603
6 h_lines    -0.0617
7 high_lines -0.0685
8 slant_down -0.0690
9 slant_up   -0.0686
10 star      -0.0630
11 v_lines   -0.0694
12 wide_lines -0.0666
13 x_shape   -0.0656
```

Exercise 5

(Add a labeled code chunk and narrative here. Insert code chunks using the “insert chunk” button (a green C with a +). Alternatively, use CMD + OPTION + I (Mac) or CTRL + ALT + I (Windows).)