

Homework #1

Group 4

5/10/2020

First, let's import the required libraries

```
library(ggplot2)
library(ggpubr)
library(dplyr)

##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:stats':
##
##   filter, lag
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
library(RColorBrewer)
```

Problem 1

- (a) Plot area vs. temp, area vs. month, area vs. DC, area vs. RH for January through December combined in one graph. Hint: Place area on Y axis and use 2x2 matrix to place the plots adjacent to each other.

```
# Import the Dataframe
forestfires <- data.frame(read.csv("./data/forestfires.csv"), stringsAsFactors = FALSE)

# Convert the month column into factors and sort from Jan-Dec
forestfires$month <- factor(forestfires$month,
                           levels = c("jan", "feb", "mar",
                                       "apr", "may", "jun",
                                       "jul", "aug", "sep",
                                       "oct", "nov", "dec"))

# Create 4 scatter plots
p1 <- ggplot(forestfires, aes(temp, area)) + geom_point(color="#d63447") +
  ggtitle("Temp vs Area") +
  theme_classic()
p2 <- ggplot(forestfires, aes(month, area, color=month)) + geom_point() +
  scale_color_brewer(palette = "Set3") +
  theme_classic() +
  theme(legend.position = "none") +
  ggtitle("Month vs Area")
p3 <- ggplot(forestfires, aes(DC, area)) + geom_point(color="#d63447") +
```

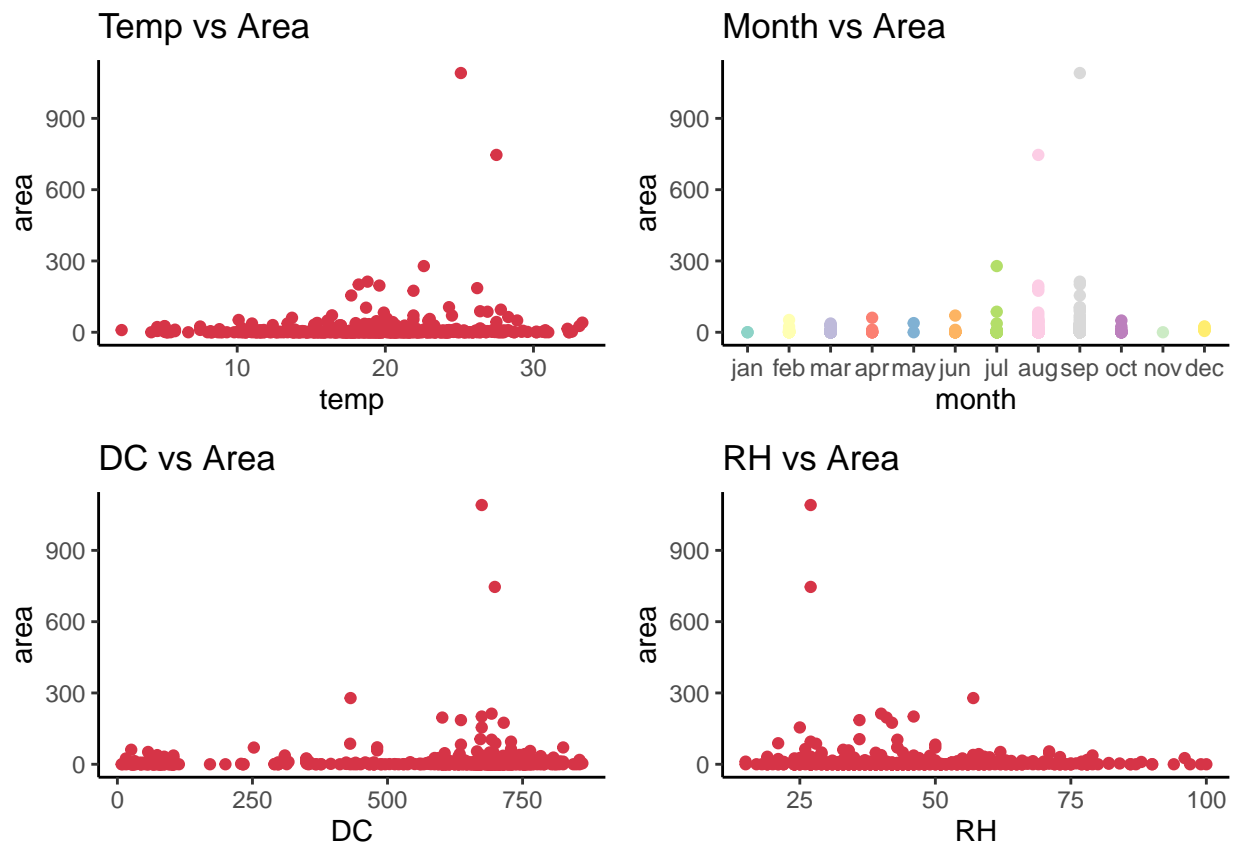
```

ggtitle("DC vs Area") +
theme_classic()
p4 <- ggplot(forestfires, aes(RH, area)) + geom_point(color="#d63447") +
ggtitle("RH vs Area") +
theme_classic()

# Arrange plots P1-P4 into a 2x2 grid
fig <- ggarrange(p1, p2, p3, p4,
                 ncol=2, nrow=2)

plot(fig)

```



```
rm(list=c("p1", "p2", "p3", "p4", "fig"))
```

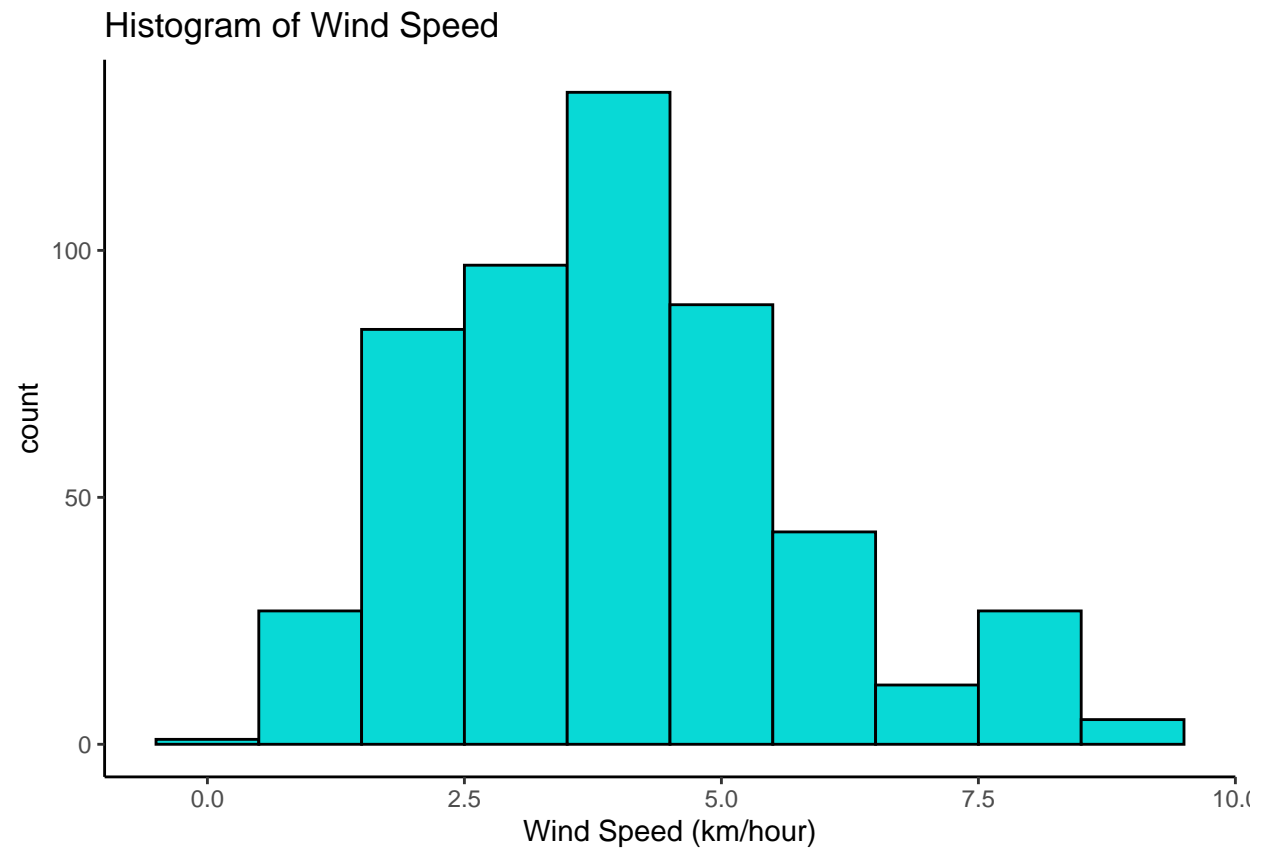
(b) Plot the histogram of wind speed (km/h).

```

# Create the Wind-Histogram
wind_hist <- ggplot(forestfires, aes(wind)) +
  geom_histogram(bins=10, fill="#08d9d6", color="black") +
  theme_classic() +
  ggtitle("Histogram of Wind Speed") +
  labs(x="Wind Speed (km/hour)")

# Plot
plot(wind_hist)

```



```
rm(wind_hist)
```