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Assignment Week 10 - Creating visuals with R

10/25/2023

Description about the dataset: The dataset that I choose to use was a standard dataset built in R called "Air Quality". This data set shows data about New York's Quality Measureme including Month's, Temps and Ozone. I found this dataset from Sampledata.org.

Description of visuals:

1. For the first visual I created a bar graph to show the average ozone levels by month. For this I used the ggplot2 package. library(ggplot2)

```
data(airquality)
avg_ozone_by_month <- aggregate(Ozone ~ Month, data = airquality, FUN = mean)
ggplot(avg_ozone_by_month, aes(x = factor(Month), y = Ozone)) +
  geom_bar(stat = "identity", fill = "skyblue") +
  labs(title = "Average Ozone Levels by Month", x = "Month", y = "Average Ozone Levels")
```

2.For the second visual I created a scatterplot to show the ozone levels vs. what the wind speed was. I used ggplot for this package as well.

```
library(ggplot2)
data(airquality)
ggplot(airquality, aes(x = Wind, y = Ozone)) +
geom_point() +
labs(title = "Ozone Levels vs. Wind Speed", x = "Wind Speed", y = "Ozone Levels")
```

3.For the third visual I created a line plot to visualize the temp and comparing it to each month. I used ggplot as well. library(ggplot2)

```
data(airquality)
ggplot(airquality, aes(x = Month, y = Temp, group = 1)) +
  geom_line(color = "green") +  labs(title = "Line Plot of Temperature vs. Month", x = "Month", y = "Temperature")
```

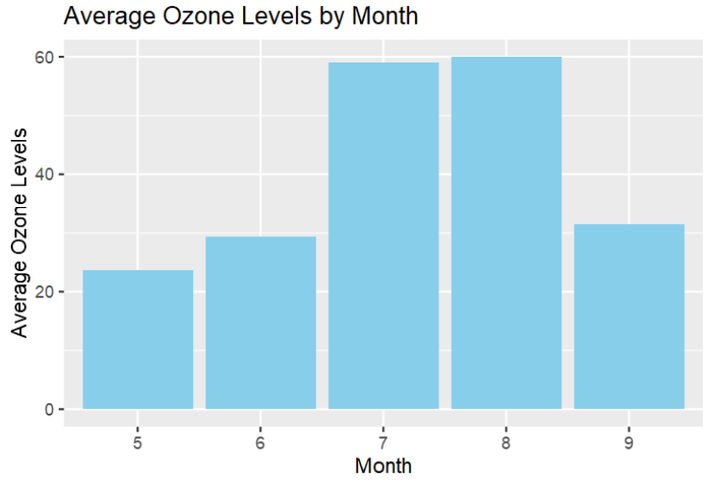
4.For the fourth visual I created a box plot to show ozone levels by month. library(ggplot2)

```
data(airquality)
ggplot(airquality, aes(x = factor(Month), y = Ozone, fill = factor(Month))) +
  geom_boxplot() + labs(title = "Box Plot of Ozone Levels by Month", x = "Month", y = "Ozone Levels") +  scale_fill_brewer(palette = "Set1")
```

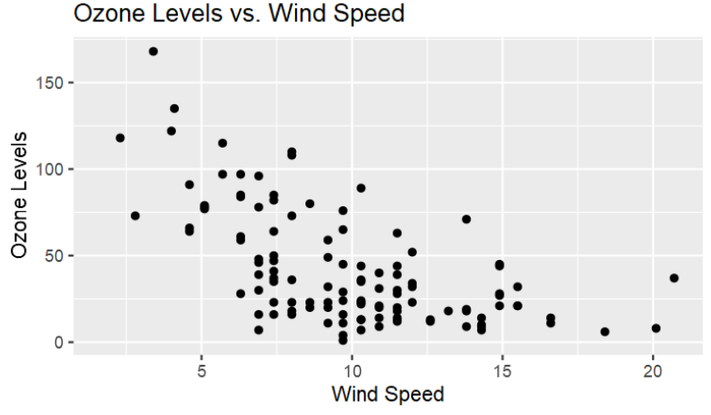
5. For the fifth visual I created a grouped bar chat to show the wind levels by month including a legend. data(airquality)

```
wind_data <- aggregate(Wind ~ Month, data = airquality, FUN = mean)
```

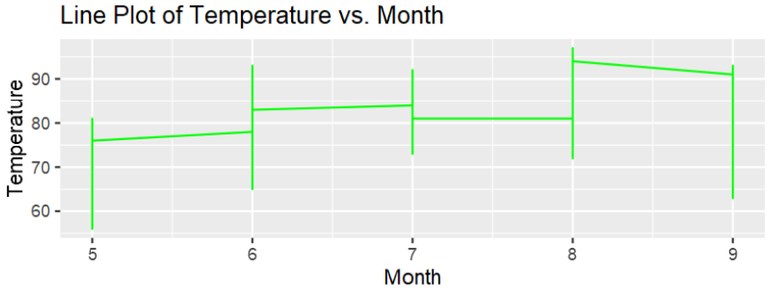
Ozone and Month



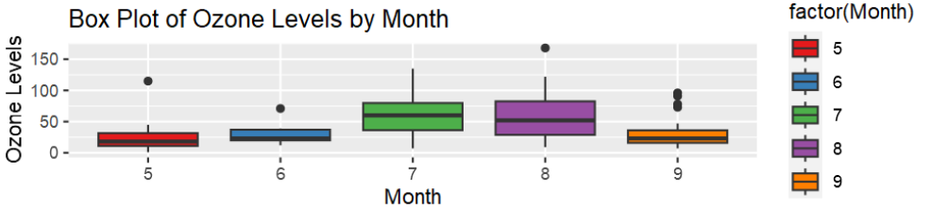
Wind and Ozone



Temp and Month



Ozone and Month



Wind and Month