Thomas Fire Progression Assignment

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For this assignment I will be analyzing data collected during the Thomas Fire.

Data/Data Table

```
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------------------- tidyverse 1.3.0 --

## v ggplot2 3.3.2     v purrr   0.3.4
## v tibble  3.0.3     v dplyr   1.0.2
## v tidyr   1.1.2     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.5.0

## -- Conflicts ------------------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(readxl)
excel_sheets("~/GitHub EEMB 144L/144l_students/Input_Data/week1/Thomas_Fire_Progression.xlsx")
```

```
## [1] "Data"     "Metadata"
```

```
thomasfire.data <- read_excel("~/GitHub EEMB 144L/144l_students/Input_Data/week1/Thomas_Fire_Progressio


glimpse(thomasfire.data)
```

```
## Rows: 39
## Columns: 5
## $ Date         <dttm> 2017-12-05, 2017-12-06, 2017-12-07, 2017-12-08, 2017-...
## $ Acres_Burned <dbl> 50000, 90000, 115000, 143000, 155000, 230000, 231700, ...
## $ Containment  <dbl> 0, 5, 5, 10, 15, 10, 20, 25, 30, 35, 35, 40, 45, 50, 5...
## $ PM10         <dbl> 68, 93, NA, 95, 109, 107, 141, 117, 100, 96, 82, 125, ...
## $ PM25         <dbl> 149, 194, 281, 177, 172, 172, 169, 169, 164, 155, 148,...
```

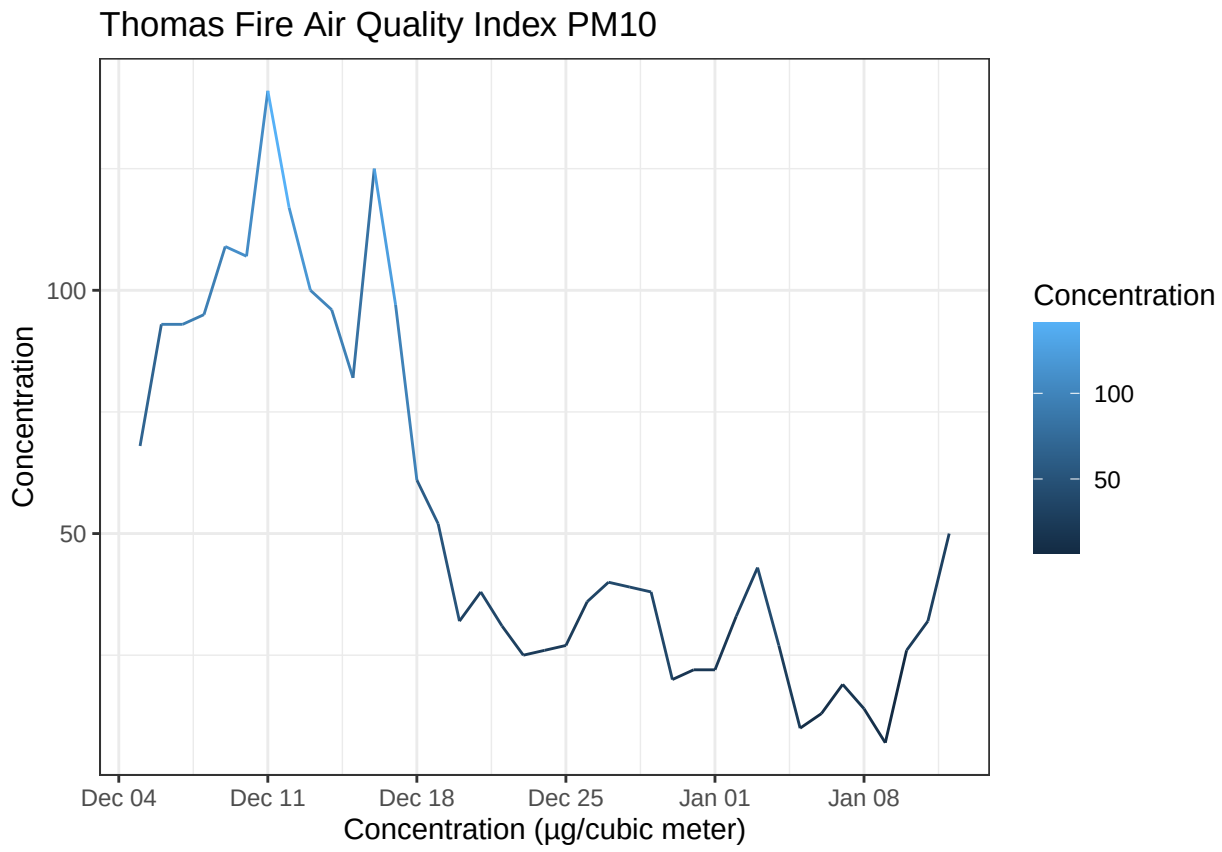
Looking at the data, I will be creating two plots that looks at air quality of both PM10 and PM2.5 over the course of the Thomas Fire.

```r
PM10.data <- thomasfire.data %>%
  select(Date, PM10) %>%
  mutate_at(vars(PM10), replace_na, 93) %>%
  rename(Concentration = PM10)
PM25.data <- thomasfire.data %>%
  select(Date, PM25) %>%
  rename(Concentration = PM25) #how to add units?
```

Graphs

Thomas Fire Air Quality Index PM10

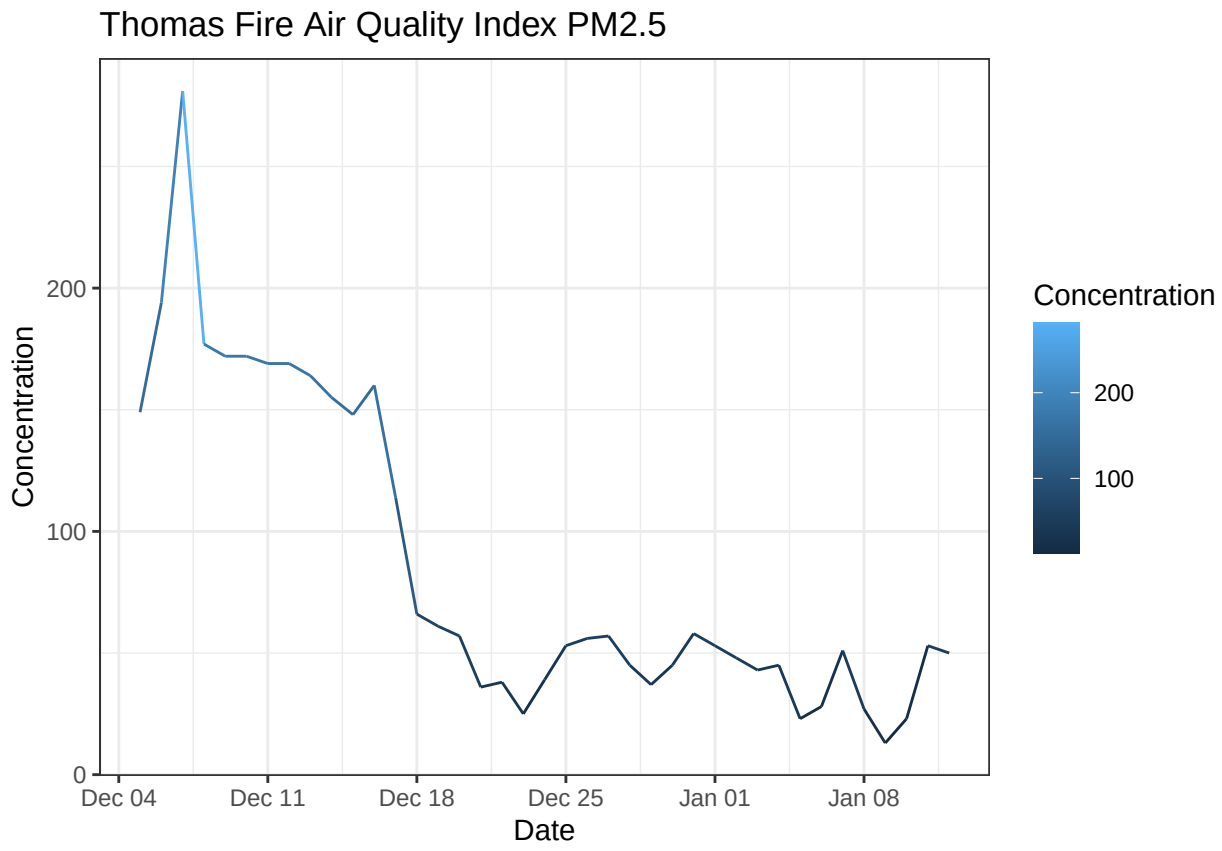
```r
ggplot(PM10.data, aes(x = Date, y = Concentration)) +
  geom_line(aes(color = Concentration)) +
  labs(title = "Thomas Fire Air Quality Index PM10", x = "Concentration (µg/cubic meter)") +
  theme_bw()
```




```r
#how to fix units?
```

Thomas Fire Air Quality Index PM2.5

```
ggplot(PM25.data, aes(x = Date, y = Concentration)) +
  geom_line(aes(color = Concentration)) +
  labs(title = "Thomas Fire Air Quality Index PM2.5") +
  theme_bw()
```




```
#how to fix units?
```