Course 1 Section 2.8 - Pedestrian activity around the City of Melbourne

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Thank for Noel Kaso sharing his work in Course 1 Section 2.8, this Rmd reference from: https://github.com/nkasono/data

Step 1: Create a new R Markdown and read in the data

Load the tidyverse package in the setup chunk.

```
library(tidyverse)
library(here)
```

Read in the pedestrian data using read_csv and give it a name (here we've named the data ped).

```
ped <- read_csv(here("data", "melb_walk.csv"))
ped
```

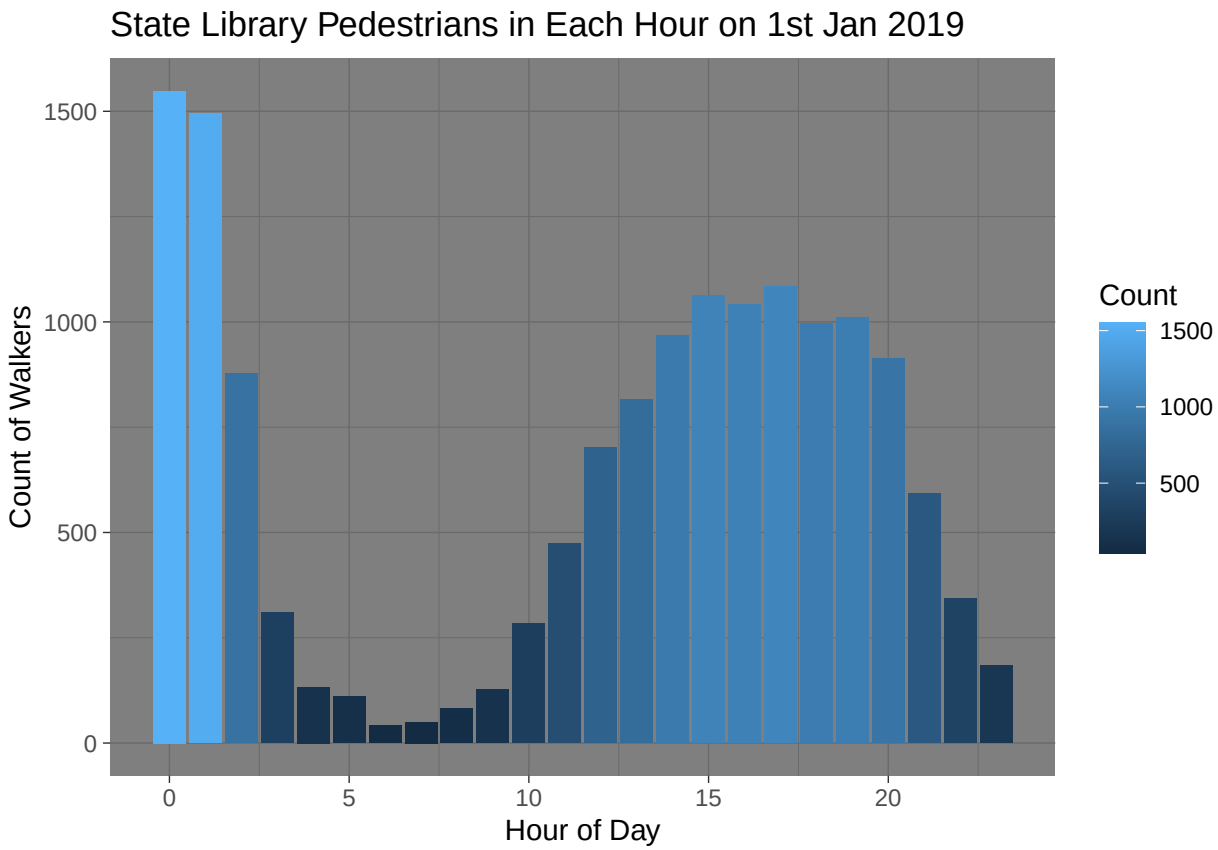
```
## # A tibble: 31,992 x 5
##    Sensor                          Date_Time           Date        Time Count
##    <chr>                           <dttm>              <date>     <dbl> <dbl>
##  1 Bourke Street Mall (North)      2018-12-31 13:00:00 2019-01-01     0   918
##  2 Bourke Street Mall (South)      2018-12-31 13:00:00 2019-01-01     0   770
##  3 Melbourne Central               2018-12-31 13:00:00 2019-01-01     0    NA
##  4 Town Hall (West)                2018-12-31 13:00:00 2019-01-01     0  3025
##  5 Princes Bridge                  2018-12-31 13:00:00 2019-01-01     0   531
##  6 Flinders Street Station Underpass 2018-12-31 13:00:00 2019-01-01     0  3284
##  7 Birrarung Marr                  2018-12-31 13:00:00 2019-01-01     0  2733
##  8 Webb Bridge                     2018-12-31 13:00:00 2019-01-01     0   762
##  9 Southern Cross Station          2018-12-31 13:00:00 2019-01-01     0  1830
## 10 Victoria Point                  2018-12-31 13:00:00 2019-01-01     0  1217
## # ... with 31,982 more rows
```

Step 2: Plot a bar chart

```
state_lib <- filter(ped, Date == "2019-01-01", Sensor == "State Library")
state_lib
```

```
## # A tibble: 24 x 5
##    Sensor        Date_Time           Date        Time Count
##    <chr>         <dttm>              <date>     <dbl> <dbl>
##  1 State Library 2018-12-31 13:00:00 2019-01-01     0  1548
##  2 State Library 2018-12-31 14:00:00 2019-01-01     1  1494
##  3 State Library 2018-12-31 15:00:00 2019-01-01     2   878
##  4 State Library 2018-12-31 16:00:00 2019-01-01     3   309
##  5 State Library 2018-12-31 17:00:00 2019-01-01     4   133
##  6 State Library 2018-12-31 18:00:00 2019-01-01     5   110
##  7 State Library 2018-12-31 19:00:00 2019-01-01     6    42
##  8 State Library 2018-12-31 20:00:00 2019-01-01     7    50
##  9 State Library 2018-12-31 21:00:00 2019-01-01     8    83
## 10 State Library 2018-12-31 22:00:00 2019-01-01     9   128
## # ... with 14 more rows
```

```
bar_state_lib <-
  ggplot(state_lib, aes(x = Time, y = Count, fill = Count)) +
  geom_bar(stat = "Identity") +
  labs(x = "Hour of Day", y = "Count of Walkers", title = "State Library Pedestrians in Each Hour on 1st
  theme_dark()
bar_state_lib
```



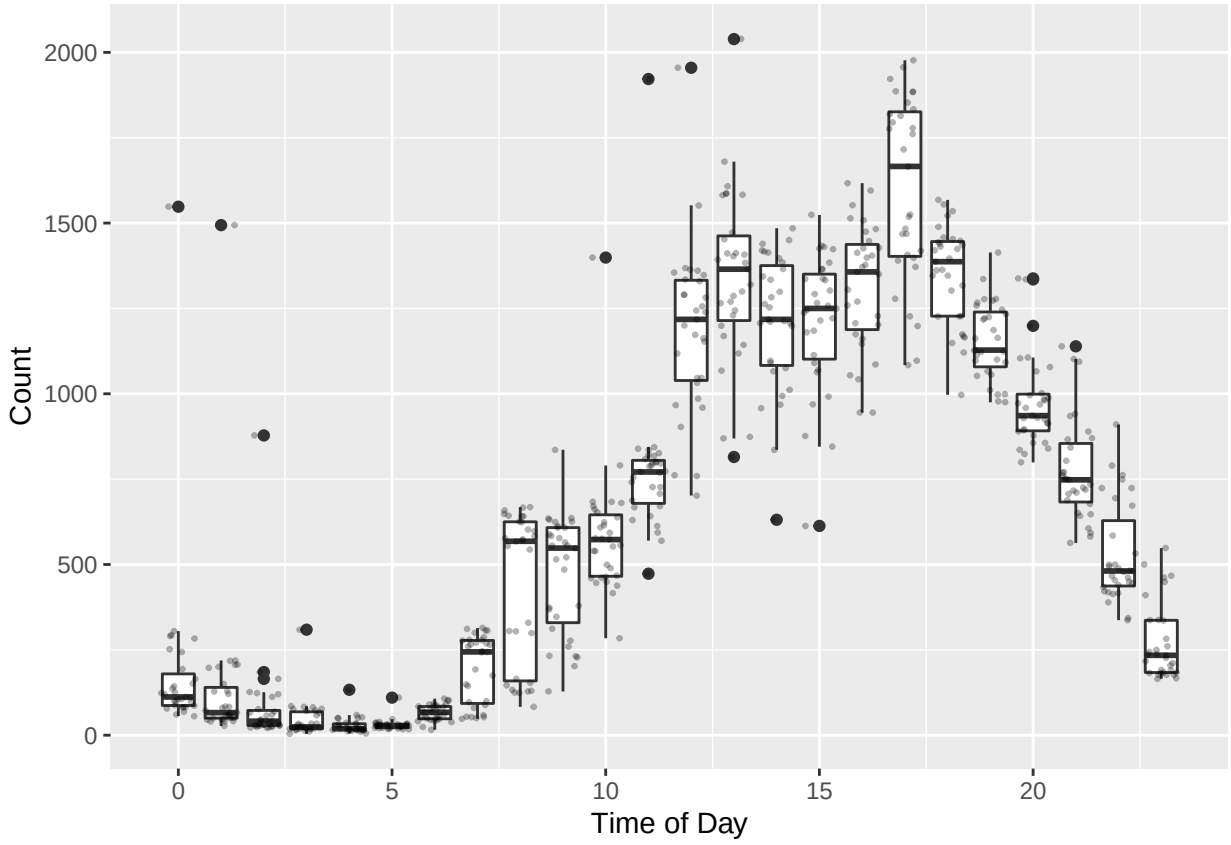
Step 3: Plot a side-by-side boxplot

```
state_lib <- filter(ped, Sensor == "State Library")
state_lib
```

```
## # A tibble: 744 x 5
##    Sensor        Date_Time           Date        Time Count
##    <chr>         <dttm>              <date>     <dbl> <dbl>
##  1 State Library 2018-12-31 13:00:00 2019-01-01     0  1548
##  2 State Library 2018-12-31 14:00:00 2019-01-01     1  1494
##  3 State Library 2018-12-31 15:00:00 2019-01-01     2   878
##  4 State Library 2018-12-31 16:00:00 2019-01-01     3   309
##  5 State Library 2018-12-31 17:00:00 2019-01-01     4   133
##  6 State Library 2018-12-31 18:00:00 2019-01-01     5   110
##  7 State Library 2018-12-31 19:00:00 2019-01-01     6    42
##  8 State Library 2018-12-31 20:00:00 2019-01-01     7    50
##  9 State Library 2018-12-31 21:00:00 2019-01-01     8    83
## 10 State Library 2018-12-31 22:00:00 2019-01-01     9   128
## # ... with 734 more rows
```

```
state_lib_boxsbs <-
  ggplot(state_lib, aes(x = Time, y = Count, group = Time)) +
  geom_boxplot() +
  geom_jitter(alpha = 0.3, size = 0.5) +
  xlab("Time of Day")

state_lib_boxsbs
```



Step 4: Extract the counts for Melbourne Central

```
melb_central <- filter(ped,
                       Sensor %in% c("Melbourne Central", "State Library"),
                       !is.na(Count),
                       Count < 5000)

melb_central_boxsbs <-
  ggplot(melb_central, aes(x = Time, y = Count, group = Time)) +
  geom_boxplot() +
  facet_grid(Sensor~.)

melb_central_boxsbs
```