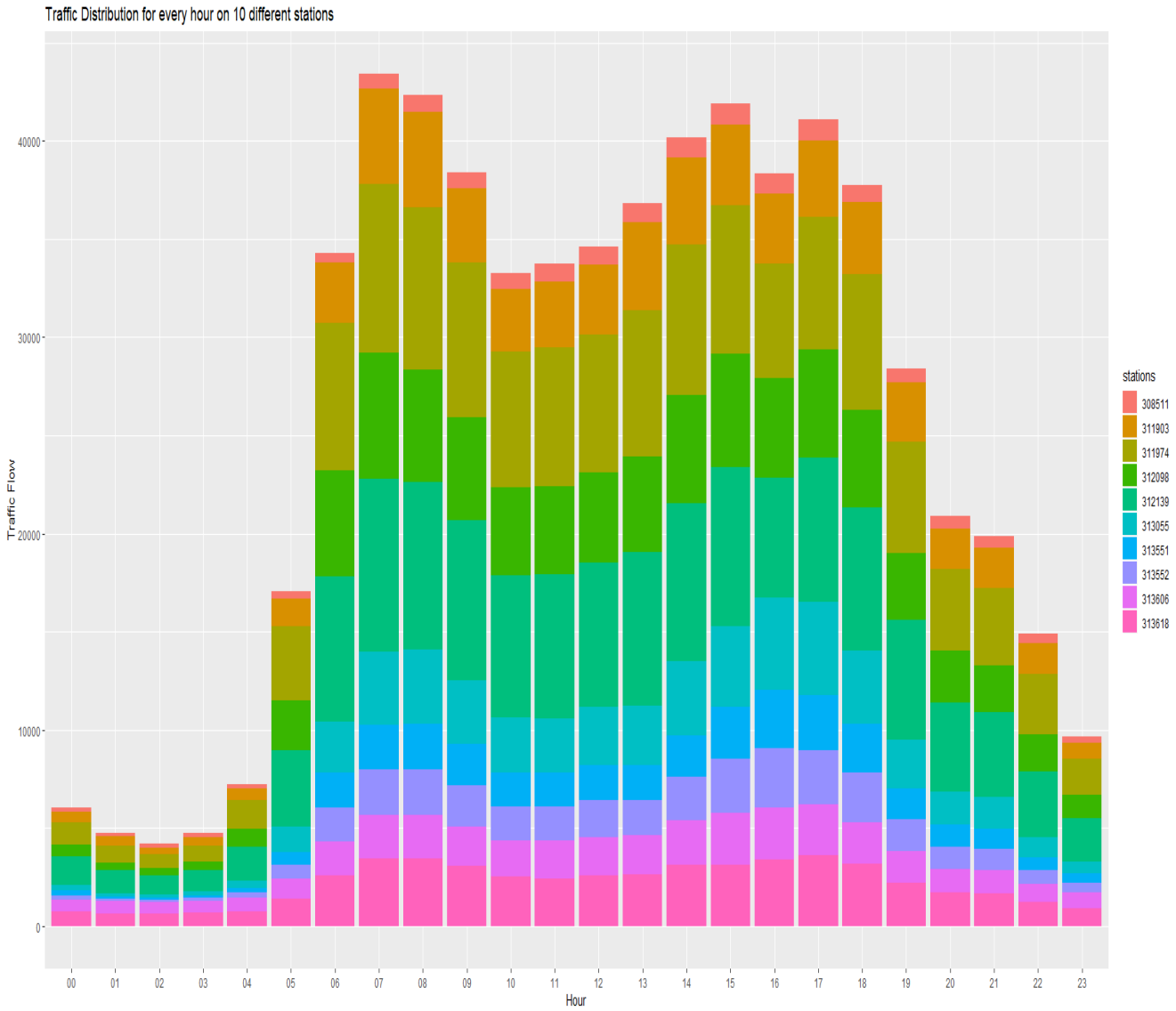
Bhuvanesh Jeevarathinam

CAP6737-Assignment 06

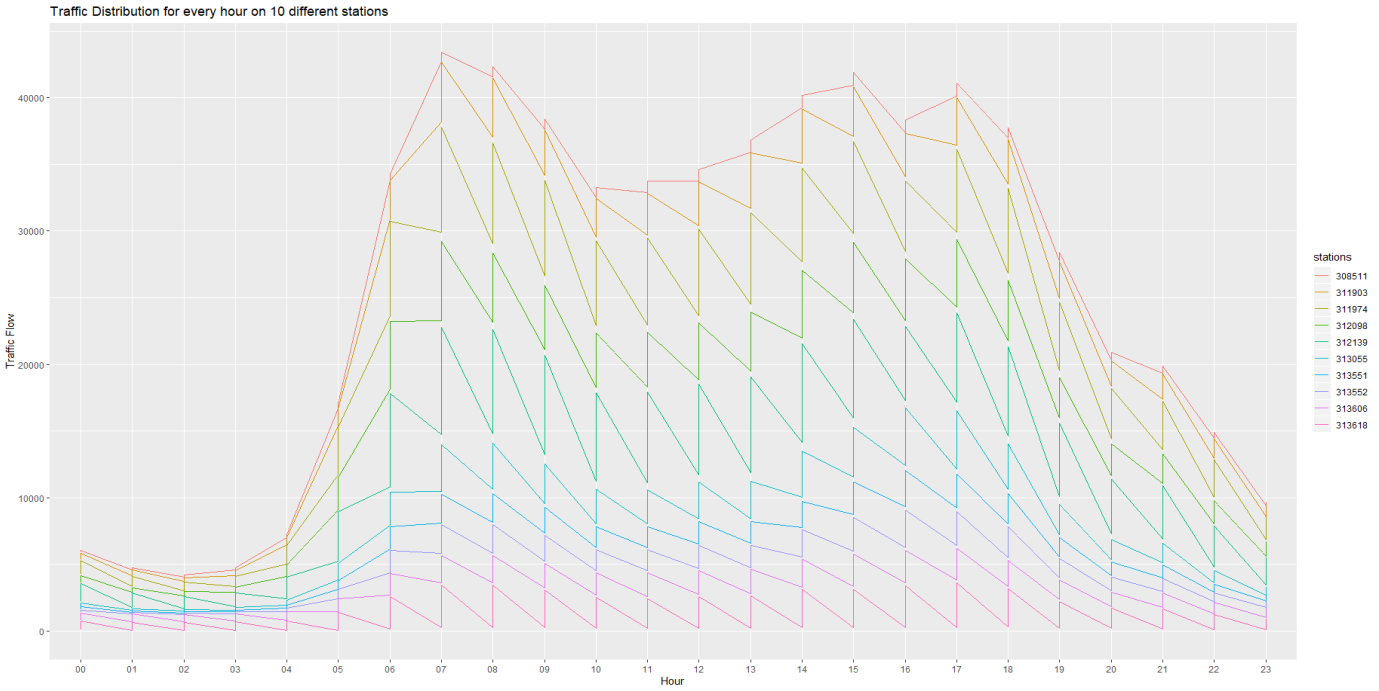
Goal: Flow distribution visualization

Flow distribution during the day measured at 10 sampled stations:

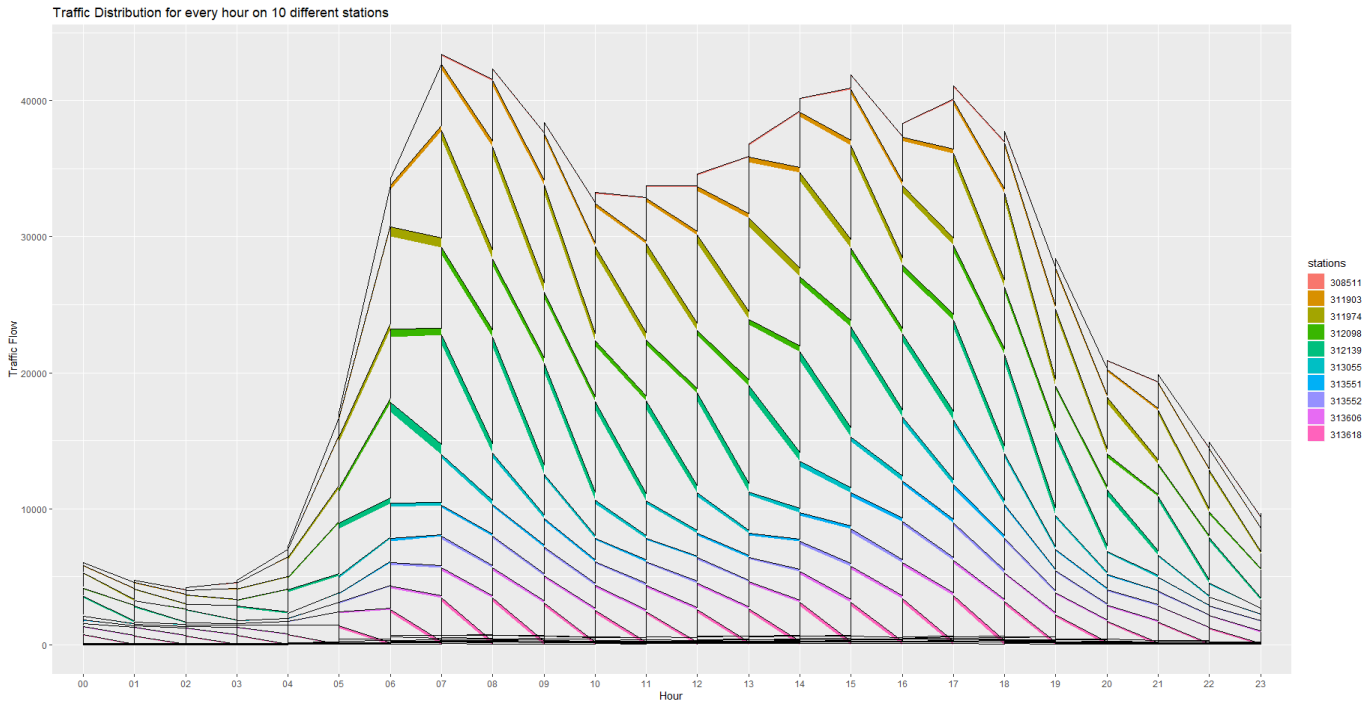
Stacked Bar chart:



Line Plot:



STACKED LINE PLOT:



R-CODE:

```
setwd("C:/Users/chat2/Downloads")
data<- read.csv("E50FlowData.csv")

library(tidyverse)
library(dplyr)
library(ggplot2)
library(extrafont)
library(plyr)
library(scales)
library(ggthemes)

which(is.na(data))
sum(is.na(data))
as.POSIXct(data$Timestamp,format="%m/%d/%Y %H:%M")
data1 <- data[ which(data$Station >308500 & data$Station < 313631),]
unique( data1$Station )
data1$hour <- format(as.POSIXct(data1$Timestamp, format="%m/%d/%Y
%H:%M"), format="%H")
data1
#aggregate(x$Frequency, by=list(Category=x$Category), FUN=sum)

data1$Total.Flow
stations <-factor(data1$Station)
```

```
ggplot(data1,aes(y=data1$Total.Flow,x=data1$hour, fill = factor(data1$Station)))
+ geom_area(position = "stack")


ggplot(data1, aes(hour, Total.Flow, group = Station)) +
  geom_point() +
  geom_line()+ggtitle('Traffic Distribution for every hour on 10 different stations')+
xlab('Hour') + ylab('Traffic Flow')


ggplot(data1, aes(data1$hour, data1$Total.Flow, group = stations)) +
  geom_line(aes(colour = stations), position = "stack") +
  ggtitle('Traffic Distribution for every hour on 10 different stations')+ xlab('Hour')
+ ylab('Traffic Flow')


ggplot(data1, aes(data1$hour, data1$Total.Flow, group = data1$Station)) +
  geom_area(aes(fill = stations)) +
  geom_line(aes(group = data1$Station), position = "stack")+
  geom_line()+ggtitle('Traffic Distribution for every hour on 10 different stations')+
xlab('Hour') + ylab('Traffic Flow')


ggplot() + geom_bar(aes(y = data1$Total.Flow, x = data1$hour, fill = stations),
data = data1,stat="identity")+ ggtitle('Traffic Distribution for every hour on 10
different stations')+ xlab('Hour') + ylab('Traffic Flow')
```

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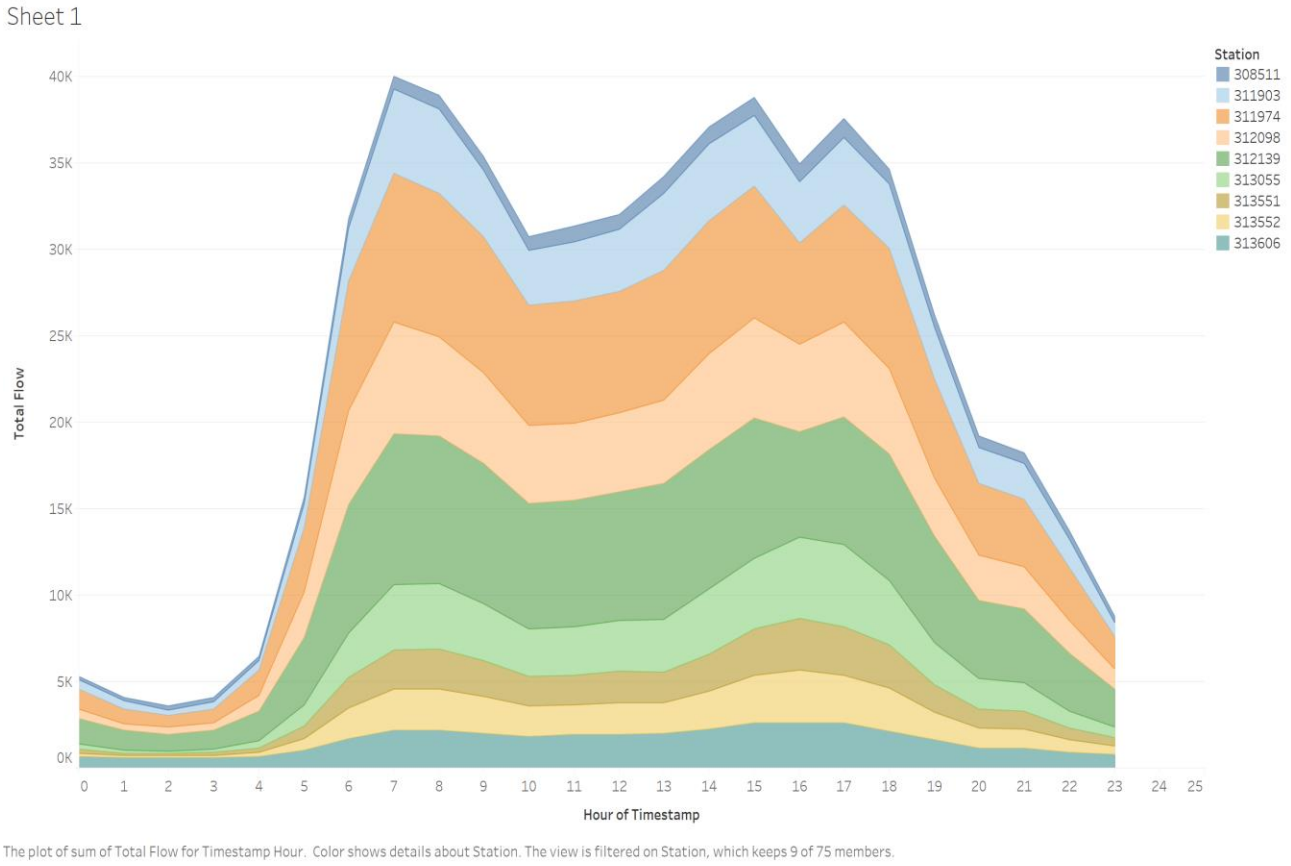
TABLEAU VIZ:



CODE LINK and TABLEAU Workbook Link:

https://github.com/bhuvaneshkj/DataVisualization-using-R/upload/master