5.2 Assignment: heat maps, spatial charts, and contour charts

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Import, Plot, Summarize, and Save Data

```
library(ggplot2)
theme_set(theme_minimal())
library(readxl)
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
```

Set the working directory to the root of your DSC 520 directory

```
setwd("C:/Users/21313711/Documents/DSC640/ex5-2/ex5-2/")
```

reading csv

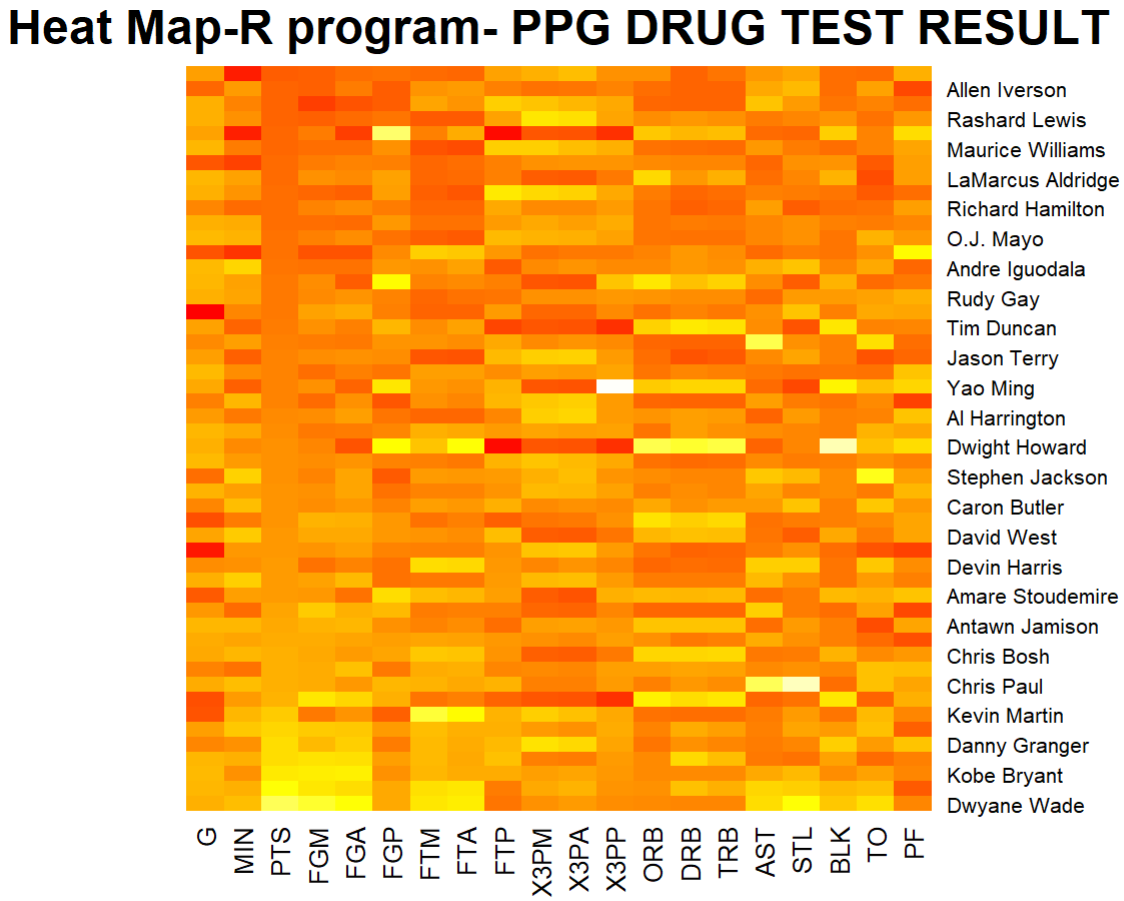
```
ppg2008_df <- read.csv("C:/Users/21313711/Documents/DSC640/ex5-2/ex5-2/ppg2008.csv")
```

```
costco_df <- read.csv("C:/Users/21313711/Documents/DSC640/ex5-2/ex5-2/costcos-geocoded.csv")

df1 <- data.frame(ppg2008_df[,-1], row.names = ppg2008_df[,1])
```

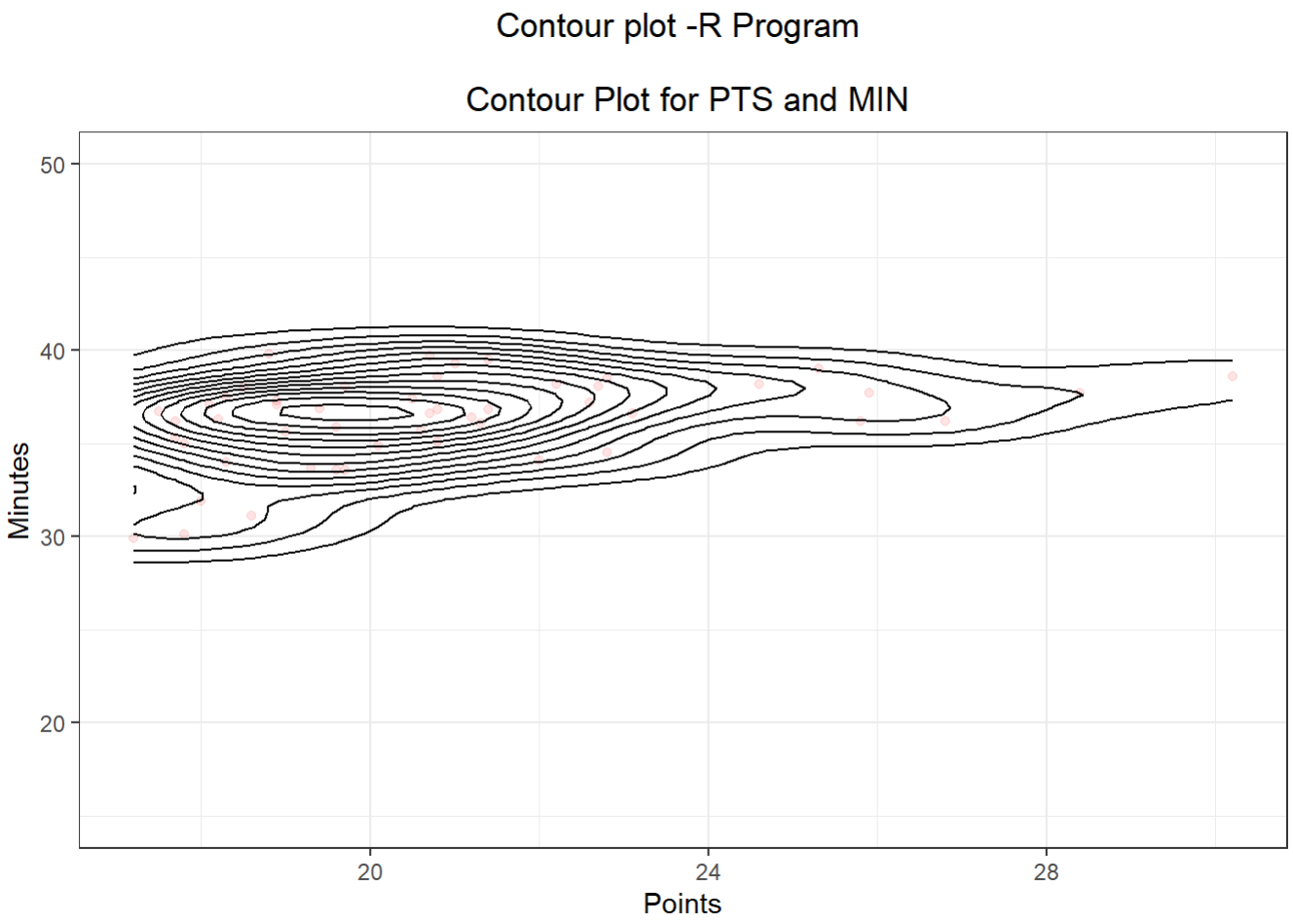
heat map

```
heatmap(as.matrix(df1), scale="column",col=heat.colors(100),main="Heat Map-R program- PPG DRUG T
EST RESULT",Rowv=NA, Colv=NA)
```



contour map

```
ggplot(data=ppg2008_df, aes(x=PTS, y=MIN)) +
  ylim(15,50) + theme_bw()+
  geom_point(alpha=0.1, col="red") +
  geom_density2d(color="black") +
  ggtitle("Contour plot -R Program \n \n Contour Plot for PTS and MIN") +
  theme(plot.title = element_text(hjust=0.5)) +
  labs(x="Points", y="Minutes")
```



maps

```
library(maps)
library(mapdata)
usa <- map_data("usa")

cost <- costco_df[costco_df$Longitude > -130,]

gg1 <- ggplot() +
  geom_polygon(data = usa, aes(x=long, y = lat, group = group), fill = "red", color = "blue") +
  coord_fixed(1.3)
gg1 +
  geom_point(data=cost, aes(x=Longitude,y=Latitude), color="black",size=2)+
  geom_point(data=cost, aes(x=Longitude,y=Latitude), color="yellow",size=1)+
  ggtitle("Saptial Map-python \n\n COSTCO STORE LOCATIONS")
```

Saptial Map-python