Basketball Manipulation Part II

Sam Eckhardt and Joey Miranda

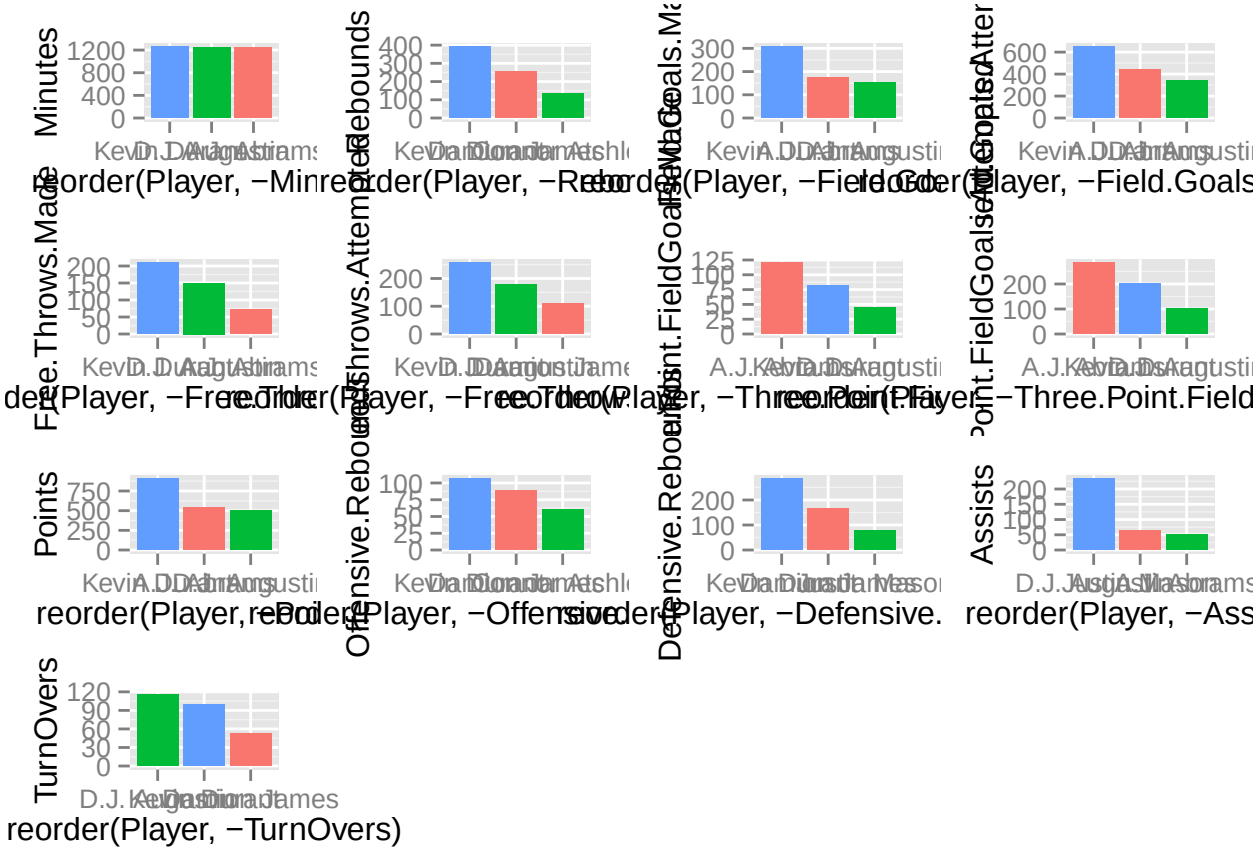
Tuesday, October 14, 2014

```
##
## 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
##
## Loading required package: grid
```

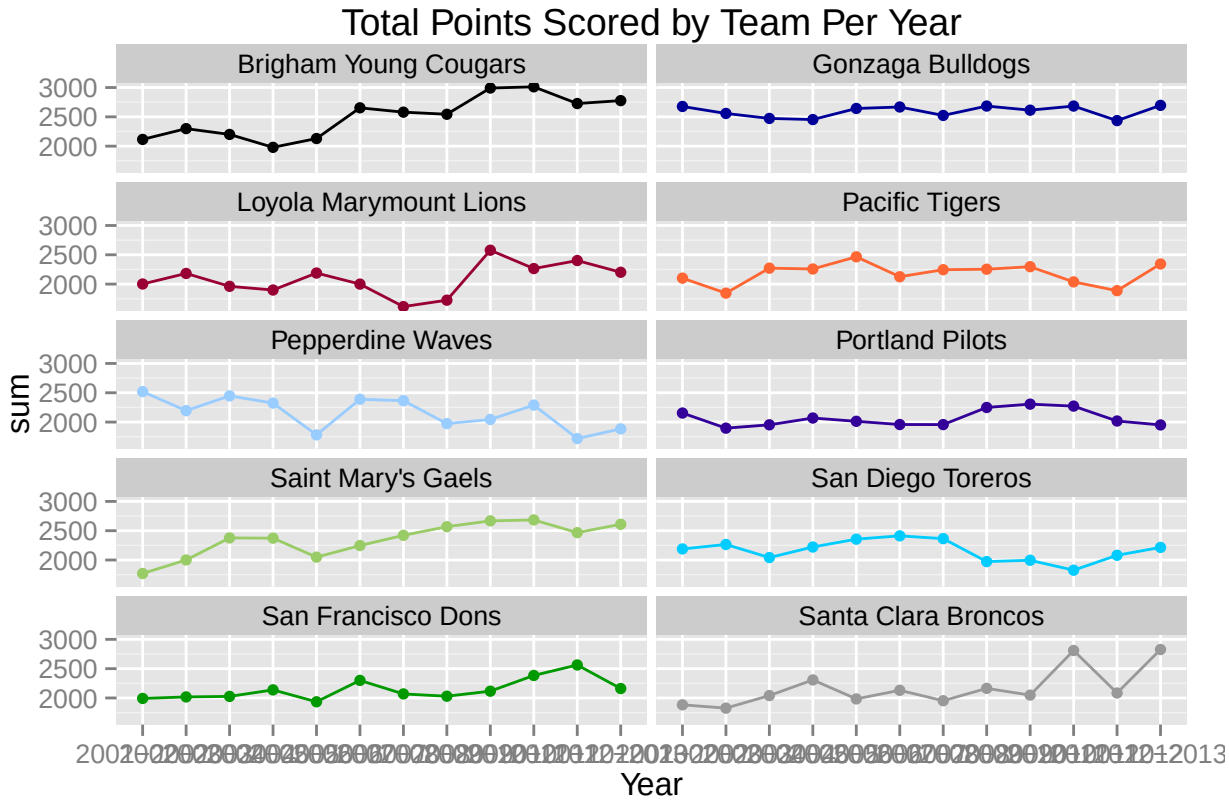
```
teamminutes<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Minutes) %>%
  arrange(-Minutes) %>%
  head(3)

p1=ggplot(teamminutes,aes(x= reorder(Player,-Minutes), y=Minutes, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")
##redone for every variable for the season. Finding the top 3 by player and the other variable.
teamrebounds<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Rebounds) %>%
  arrange(-Rebounds) %>%
  head(3)

p2=ggplot(teamrebounds,aes(x=reorder(Player,-Rebounds), y=Rebounds, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teammadefg<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Field.Goals.Made) %>%
  arrange(-Field.Goals.Made) %>%
  head(3)

p3=ggplot(teammadefg,aes(x=reorder(Player,-Field.Goals.Made), y=Field.Goals.Made, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teamattfg<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Field.Goals.Attempted) %>%
  arrange(-Field.Goals.Attempted) %>%
```

```
  head(3)

p4=ggplot(teamattfg,aes(x=reorder(Player,-Field.Goals.Attempted), y=Field.Goals.Attempted, fill=Player,)
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teammadeft<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Free.Throws.Made) %>%
  arrange(-Free.Throws.Made) %>%
  head(3)

p5=ggplot(teammadeft,aes(x=reorder(Player,-Free.Throws.Made), y=Free.Throws.Made, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teamattft<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Free.Throws.Attempted) %>%
  arrange(-Free.Throws.Attempted) %>%
  head(3)

p6=ggplot(teamattft,aes(x=reorder(Player,-Free.Throws.Attempted), y=Free.Throws.Attempted, fill=Player,
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

team3ptmade<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Three.Point.FieldGoals.Made) %>%
  arrange(-Three.Point.FieldGoals.Made) %>%
  head(3)

p7=ggplot(team3ptmade,aes(x=reorder(Player,-Three.Point.FieldGoals.Made), y=Three.Point.FieldGoals.Made
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

team3ptatt<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Three.Point.FieldGoals.Attempted) %>%
  arrange(-Three.Point.FieldGoals.Attempted) %>%
  head(3)

p8=ggplot(team3ptatt,aes(x=reorder(Player,-Three.Point.FieldGoals.Attempted), y=Three.Point.FieldGoals.
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teampoints<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Points) %>%
  arrange(-Points) %>%
  head(3)

p9=ggplot(teampoints,aes(x=reorder(Player,-Points), y=Points, fill=Player,))%>%
```

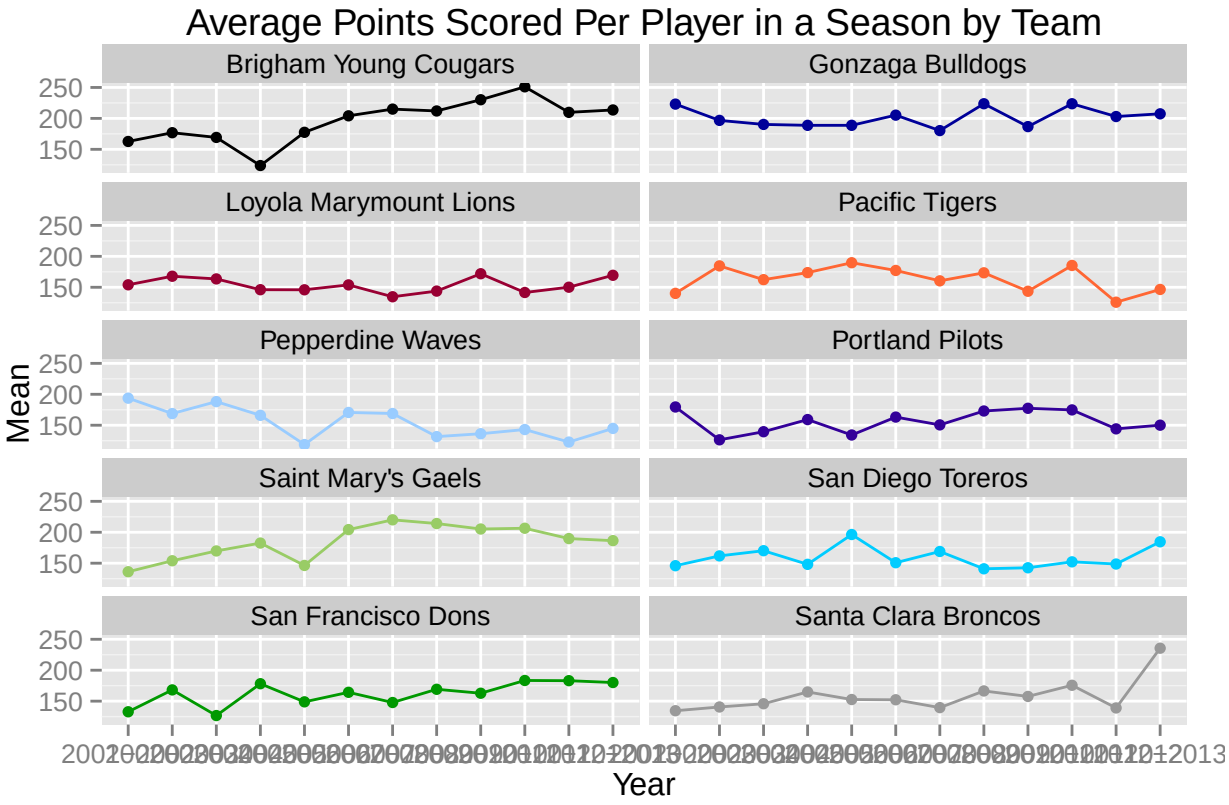
```
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teamoffreb<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Offensive.Rebounds) %>%
  arrange(-Offensive.Rebounds) %>%
  head(3)

p10=ggplot(teamoffreb,aes(x=reorder(Player,-Offensive.Rebounds), y=Offensive.Rebounds, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teamdefreb<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Defensive.Rebounds) %>%
  arrange(-Defensive.Rebounds) %>%
  head(3)

p11=ggplot(teamdefreb,aes(x=reorder(Player,-Defensive.Rebounds), y=Defensive.Rebounds, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teamassist<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, Assists) %>%
  arrange(-Assists) %>%
  head(3)

p12=ggplot(teamassist,aes(x=reorder(Player,-Assists), y=Assists, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

teamto<-Seasonstatistics %>%
  filter(Team=="Texas Longhorns",Year=="2006-2007") %>%
  select(Player, TurnOvers) %>%
  arrange(-TurnOvers) %>%
  head(3)

p13=ggplot(teamto,aes(x=reorder(Player,-TurnOvers), y=TurnOvers, fill=Player,))%>%
  + geom_bar(stat="identity")%>%
  + theme(legend.position="none")

grid.arrange(p1,p2,p3,p4,p5,p6,p7,p8,p9,p10,p11,p12,p13,ncol=4)
```




```
newdf=Seasonstatistics %>%
  tbl_df(.)%>%
  select(2:18,20)%>%
  melt(.,id=c("Team","Year","Conference"))%>%
  filter(Conference=="West Coast")%>%
  group_by(Team,Year,variable) %>%
  summarise(sum=sum(value),Mean=mean(value))

#Dataframe created, summarising for mean and sum
teampaletteWCC <- c("#000000","#000099","#990033","#FF6633","#99CCFF","#330099","#99CC66","#00CCFF","#0
##Color palette for the WCC teams from the last assignment

ggplot(subset(newdf,variable %in% c("Points")),aes(x=Year, y=sum, color=Team, group=Team))%>%
  +geom_point()%>%
  +geom_line()%>%
  +facet_wrap(~Team,ncol=2)%>%
  +ggtitle("Total Points Scored by Team Per Year")%>%
  +scale_color_manual(values=teampaletteWCC)%>%
  + theme(legend.position="none")
```

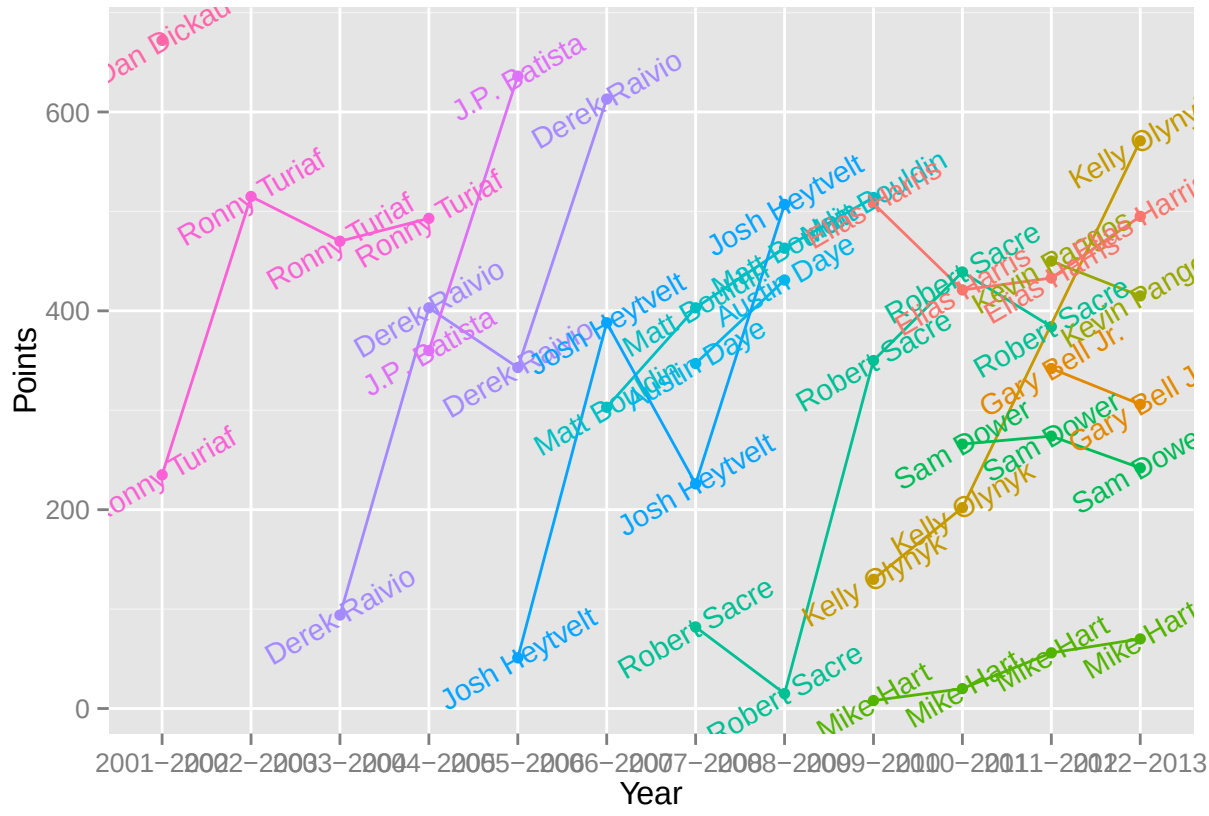



```
ggplot(subset(newdf,variable %in% c("Points")),aes(x=Year, y=Mean, color=Team, group=Team))%>%
  +geom_point()%>%
  +geom_line()%>%
  +facet_wrap(~Team,ncol=2)%>%
  +ggtitle("Average Points Scored Per Player in a Season by Team")%>%
  +scale_color_manual(values=teampaletteWCC)%>%
  + theme(legend.position="none")
```




```
GonzagaPoints<-Seasonstatistics %>%
  filter(Team=="Gonzaga Bulldogs") %>%
  select(Player, Points,Year) %>%
  arrange(Year)

##Dataframe only showing Gonzaga Players, their Points, and the Years they played.

ggplot(subset(GonzagaPoints,Player %in% c("Dan Dickau","Ronny Turiaf","Adam Morrison","Derek Raivio","J
  +geom_point()%>%
  +geom_line()%>%
  +geom_text(aes(label=Player),size=4,angle=30)%>%
  +theme(legend.position="none")
```


```
##selected all players individually.

ggplot(subset(GonzagaPoints,Player %in% c("Dan Dickau","Ronny Turiaf","Derek Raivio","Josh Heytvelt","Ma
  +geom_point()%>%
  +geom_line()%>%
  +geom_text(aes(label=Player),size=4,angle=30)%>%
  +theme(legend.position="none")
```




```
##Took out Adam Morrison, makes things easier to see.
```