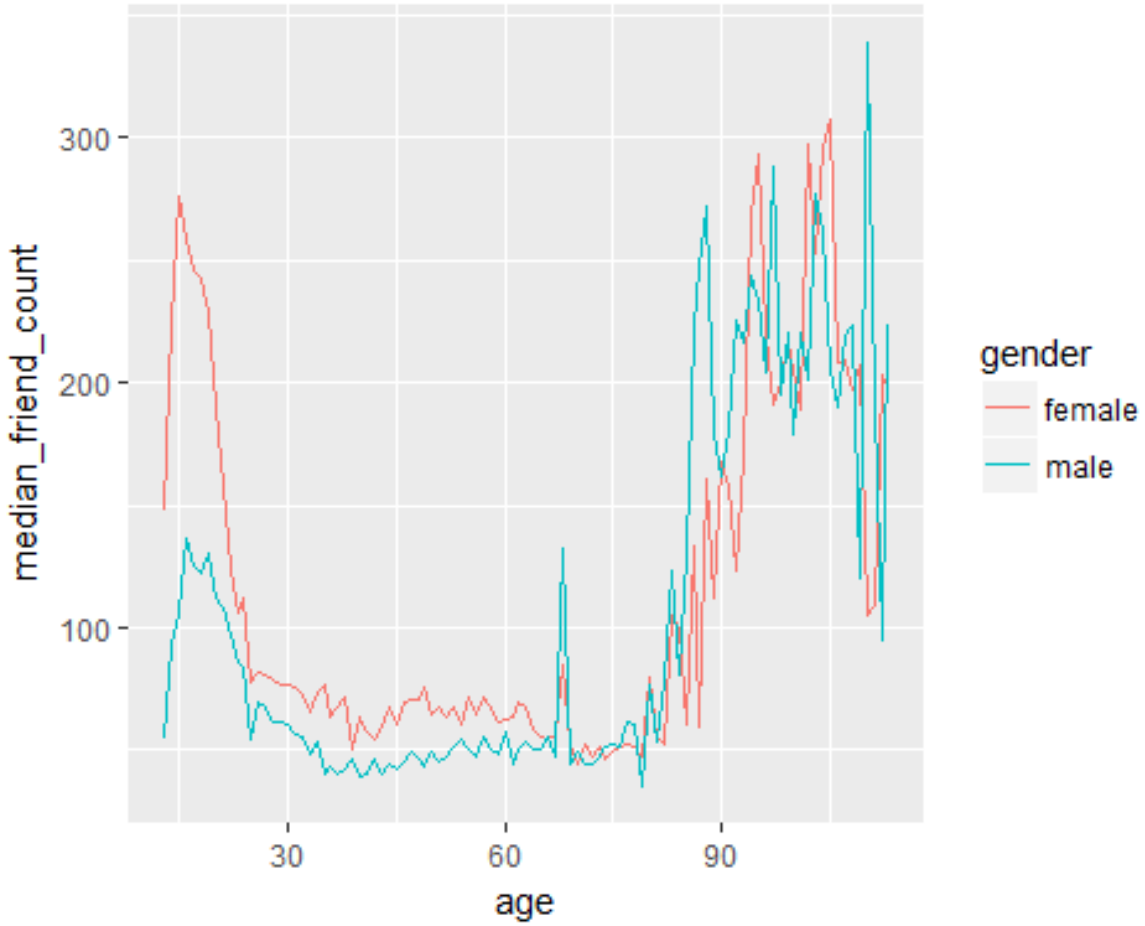
Facebook3Var

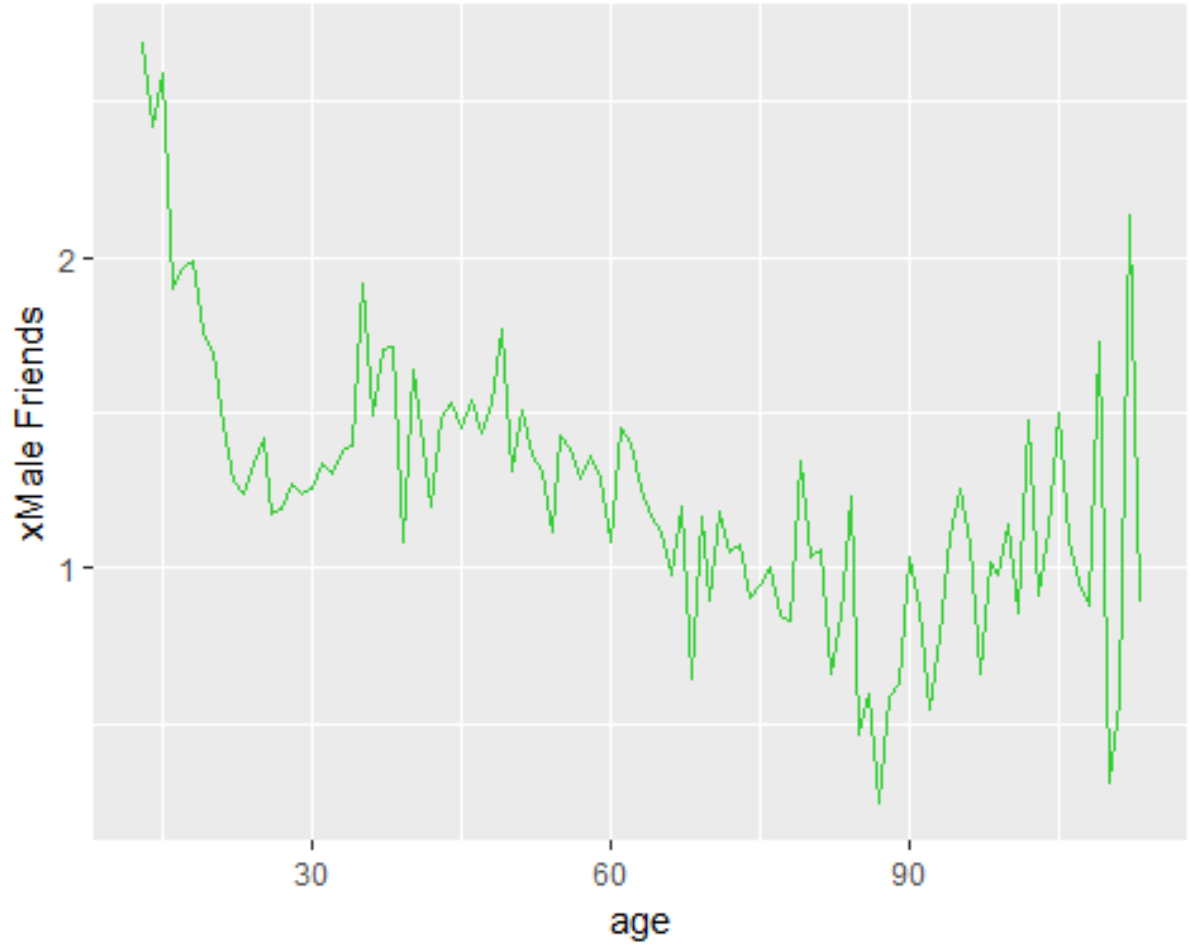
```r
#Grouping by age and gender
pf.fc_by_age_gender <- pf %>%
  filter(!is.na(gender)) %>%
  group_by(age, gender) %>%
  summarise(mean_friend_count = mean(friend_count),
            median_friend_count = median(friend_count),
            n = n()) %>%
  ungroup() %>%
  arrange(age)

#putting color in an aesthetic wrapper in the line
ggplot(pf.fc_by_age_gender, aes(x=age, y=median_friend_count))
+geom_line(aes(color=gender))
```



```r
#Creating a wide dataframe
library(reshape2)
pf.fc_by_age_gender.wide <- dcast(pf.fc_by_age_gender,
                                  age ~ gender,
                                  value.var = 'median_friend_count')

#Plotting the multiple of friends that females have compared to men
ggplot(pf.fc_by_age_gender.wide, aes(x=age, y=female/male))
+geom_line(color='lime green')+
  ylab('xMale Friends')
```



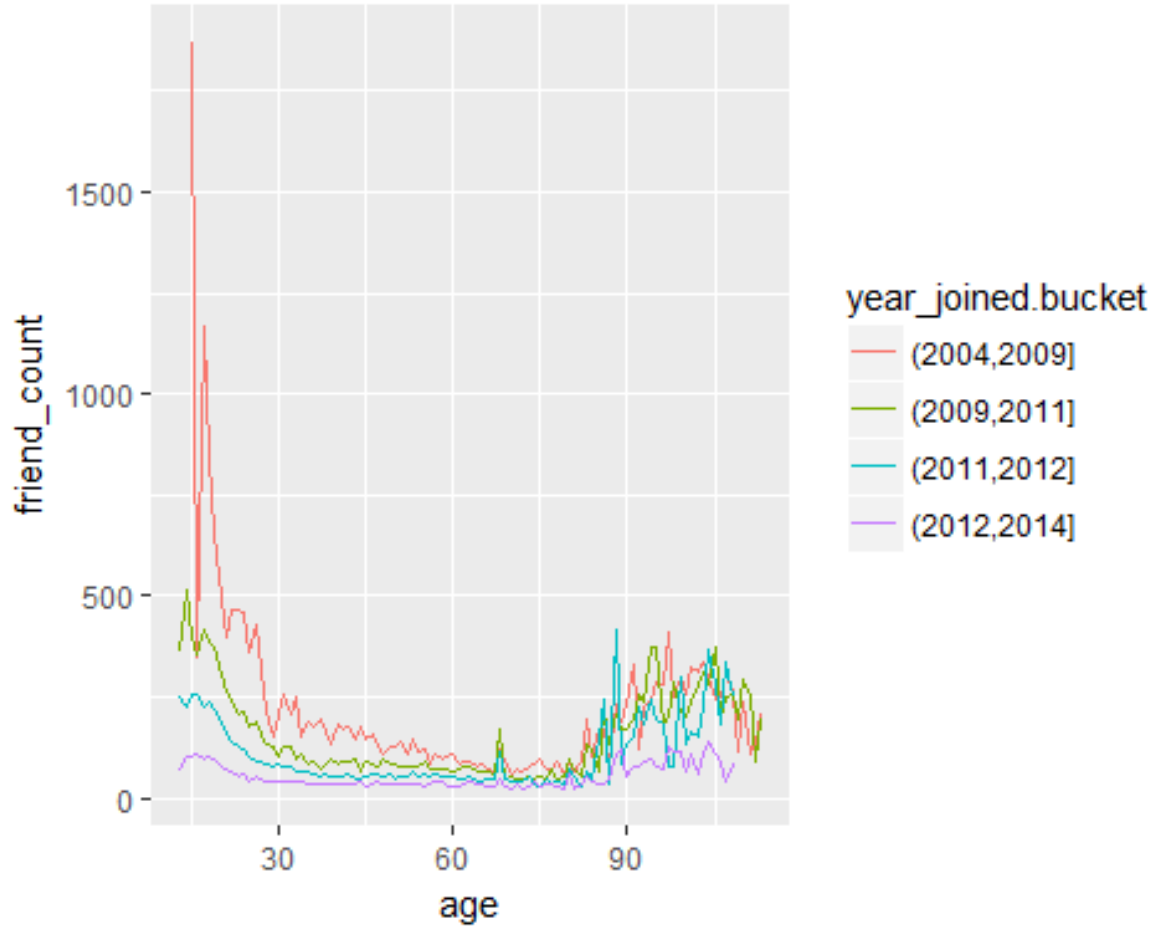
```r
#Creating a variable year joined by subtracting tenure(days) from date of
sample (2014)
pf$year_joined <- floor(2014 - (pf$tenure/365))
summary(pf$year_joined)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##    2005    2012    2012    2012    2013    2014       2
```

```r
pf$year_joined.bucket <- cut(pf$year_joined, breaks = c(2004,2009,2011,2012,
2014))
table(pf$year_joined.bucket)
```

```
##
## (2004,2009] (2009,2011] (2011,2012] (2012,2014]
##        6669       15308       33366       43658
```

```r
#Plotting the different lines for each year joined bucket
ggplot(subset(pf, !is.na(pf$year_joined.bucket)), aes(x=age,
y=friend_count))+
  geom_line(aes(color=year_joined.bucket), stat='summary', fun.y=median)
```



```r
#Plotting the mean but also adding the GrandMean (black line)
ggplot(subset(pf, !is.na(pf$year_joined.bucket)), aes(x=age,
y=friend_count))+
  geom_line(aes(color=year_joined.bucket), stat='summary', fun.y=mean)+
  geom_line(stat='summary', fun.y=mean)
```