

project 1

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EDA

Direction: People donate through which methods? Where 3k-99k people are likely to donate? People who donate for certain events / through certain ways are tends to donate more / to be the 3k - 99k?

Do this by building bar graphs for different methods, how many jumped / not jumped people made donation through certain methods? Building predictive model to prove the guess / hypothesis

```
table(d3k99k$param_ID_DATECOMPARETYPE)
```

```
##
##      1      2
## 22335 1380167
```

```
# table(d3k99k$param_ID_DATEDIMID)
table(d3k99k$IS_DONOR)
```

```
##
##      1
## 1402502
```

```
table(d3k99k$IS_DONOR_GIFT_3K)
```

```
##
##      0      1
## 1401497  1005
```

```
table(d3k99k$param_ID_DATECOMPARETYPE, d3k99k$IS_DONOR_GIFT_3K)
```

```
##
##           0           1
##    1    21856        479
##    2 1379641        526
```

why people in 3k-99k never made 3k+ gift

```
table(d3k99k$IS_DONOR_GIFT_3K100K)
```

```
##
##           0
## 1402502
```

How would they call them transit if they never made gift above 3K
So the largest gift is 3K ?

```
table(d3k99k$IS_DONOR_GIFT_100K)
```

```
##
##           0           1
## 1401497    1005
```

```
table(d3k99k$IS_DONOR_GIFT_1M)
```

```
##
##           0           1
## 1402409     93
```

```
table(d3k99k$IS_DONOR_GIFT_5M)
```

```
##
##           0           1
## 1402483     19
```

```
table(d3k99k$IS_DONOR_APPEAL_AG_ONLY)
```

```
##
##           0           1
## 1103711  298791
```

```
table(d3k99k$param_ID_DATECOMPARETYPE)
```

```
##
##      1      2
## 22335 1380167
```

```
table(d3k99k$IS_DONOR_APPEAL_DM)
```

```
##
##      0      1
## 1168915 233587
```

```
counts = table(d3k99k$param_ID_DATECOMPARETYPE, d3k99k$IS_DONOR_APPEAL_DM)

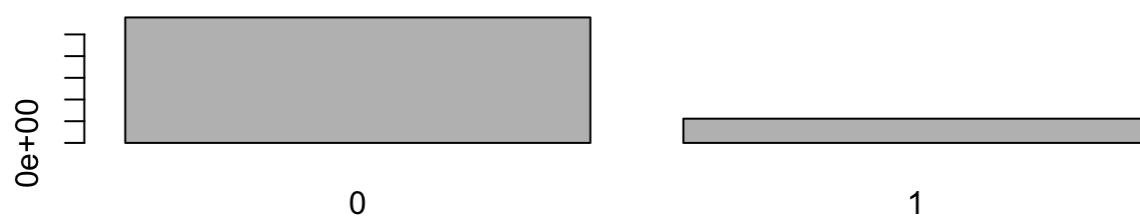
# Making subset of people who made the jump and who did not made the jump
d3k99k_no_jump = d3k99k[d3k99k$param_ID_DATECOMPARETYPE %in% c("1"),]
d3k99k_jumped = d3k99k[d3k99k$param_ID_DATECOMPARETYPE %in% c("2"),]
```

For the first few graphs, it is kinds of hard to tell the trend, because people who made the jump may used to be the person under 3k, they might also have made small gifts before.

Problem: data might be overlaped

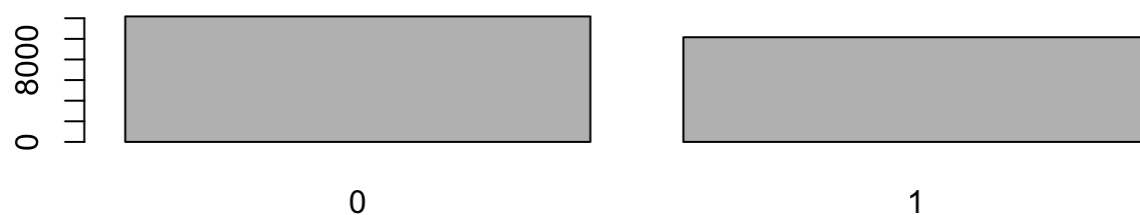
```
# Creating graphs
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_DM), main = "People who has made the jump", sub = "1
= Made Gift through Direct Mail")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_DM), main = "People who has not made the jump", sub
= "0 = Never Made Gift through Direct Mail")
```

People who has made the jump



1 = Made Gift through Direct Mail

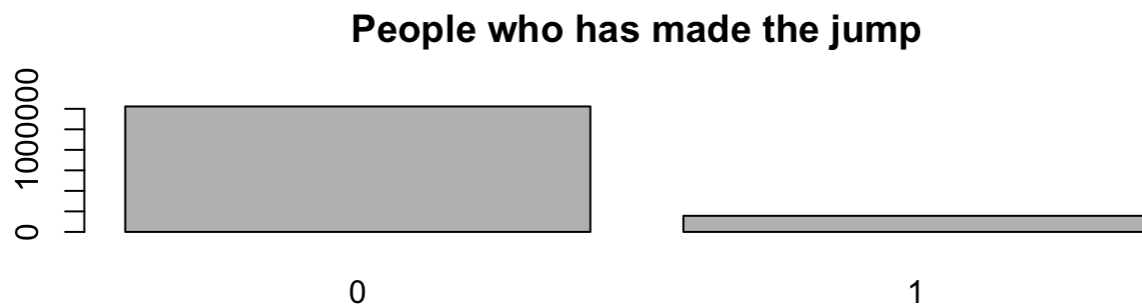
People who has not made the jump



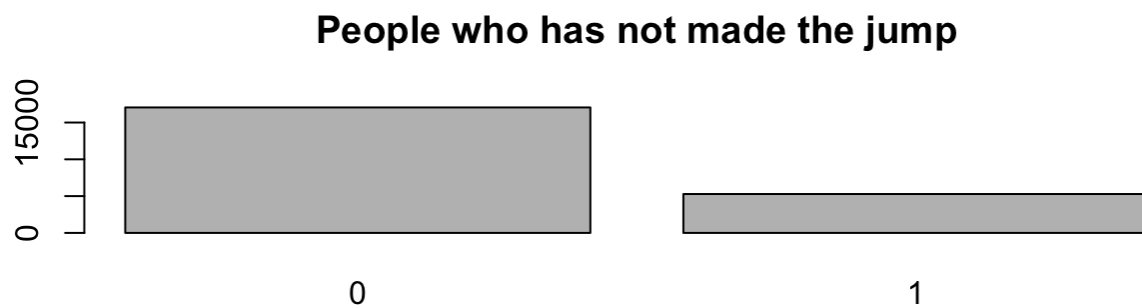
0 = Never Made Gift through Direct Mail

We can tell from this graph that for people who has made the jump, there is only small portion of them made the Mail gift
 # Guess for here: Mail gift are for small amount, thus, for people who did not made the jump, they tends to donate through Direct Mail

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_ONLINE), main = "People who has made the jump", sub
  = "1 = Made Gift Online")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_ONLINE), main = "People who has not made the jump",
  sub = "0 = Never Made Gift Online")
```



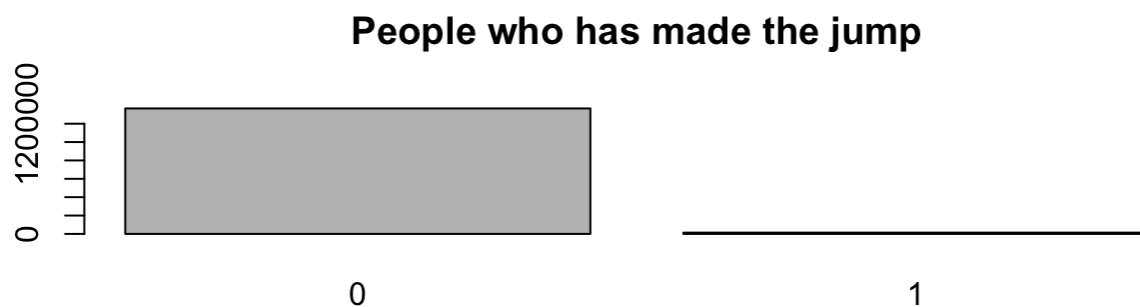
1 = Made Gift Online



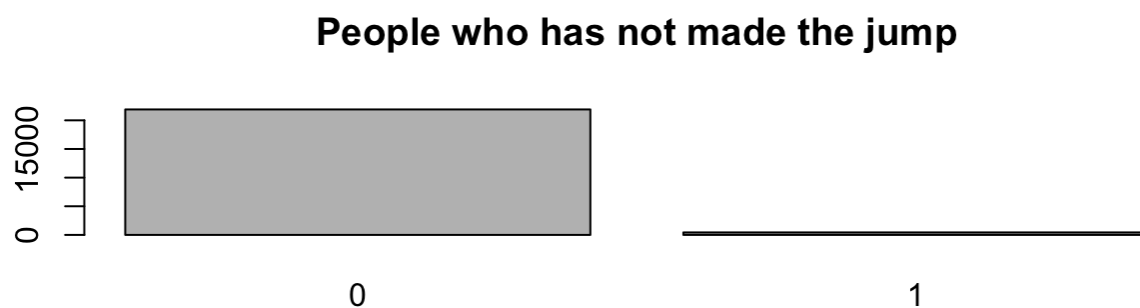
0 = Never Made Gift Online

We can tell from this graph that for people who has made the jump, there is only small portion of them made the Mail gift
Guess for here: Mail gift are for small amount, thus, for people who did not made the jump, they tends to donate through Direct Mail

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_EMAIL), main = "People who has made the jump", sub =
"1 = Made Gift through Email")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_EMAIL), main = "People who has not made the jump",
sub = "0 = Never Made Gift through Email")
```



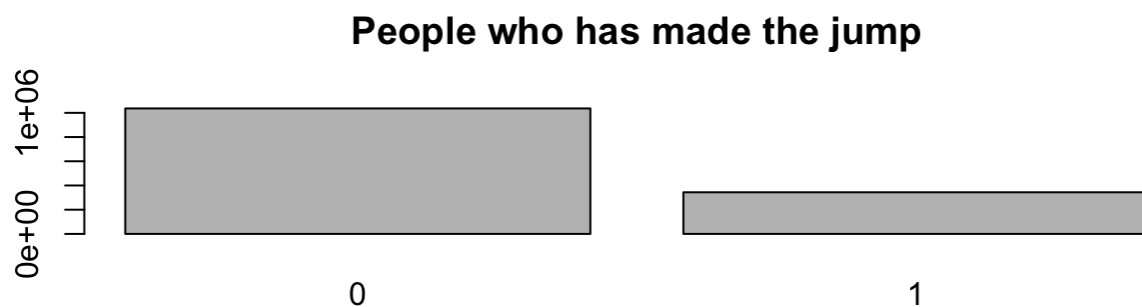
1 = Made Gift through Email



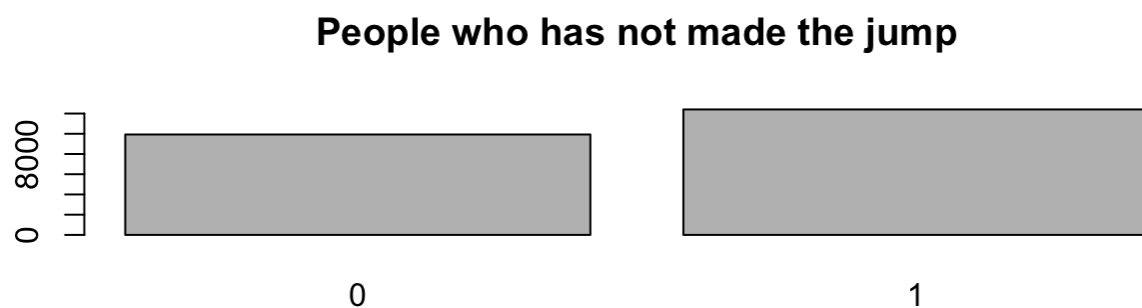
0 = Never Made Gift through Email

We can tell from this graph that for people who has made the jump, there is only small portion of them made the Mail gift
Guess for here: Mail gift are for small amount, thus, for people who did not made the jump, they tends to donate through Direct Mail

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_PHONE), main = "People who has made the jump", sub =
"1 = Made Gift through Phone Call")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_PHONE), main = "People who has not made the jump",
sub = "0 = Never Made Gift through Phone Call")
```



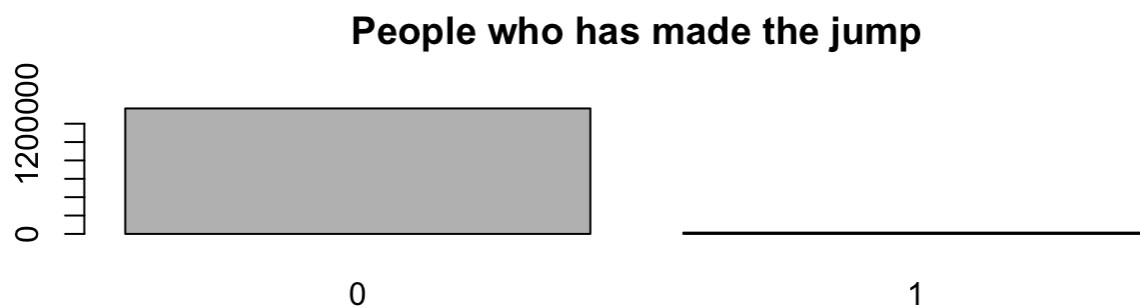
1 = Made Gift through Phone Call



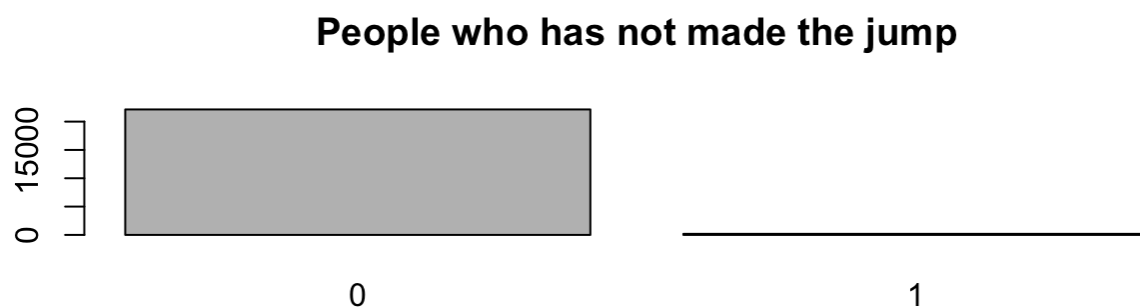
0 = Never Made Gift through Phone Call

We can tell from this graph that for people who has made the jump, there is only small portion of them made the Mail gift
Guess for here: Mail gift are for small amount, thus, for people who did not made the jump, they tends to donate through Direct Mail

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_GIVINGDAY), main = "People who has made the jump", sub = "1 = Made Gift as part of an online Giving Day solicitation")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_GIVINGDAY), main = "People who has not made the jump", sub = "0 = as part of an online Giving Day solicitation")
```



1 = Made Gift as part of an online Giving Day solicitation



0 = as part of an online Giving Day solicitation

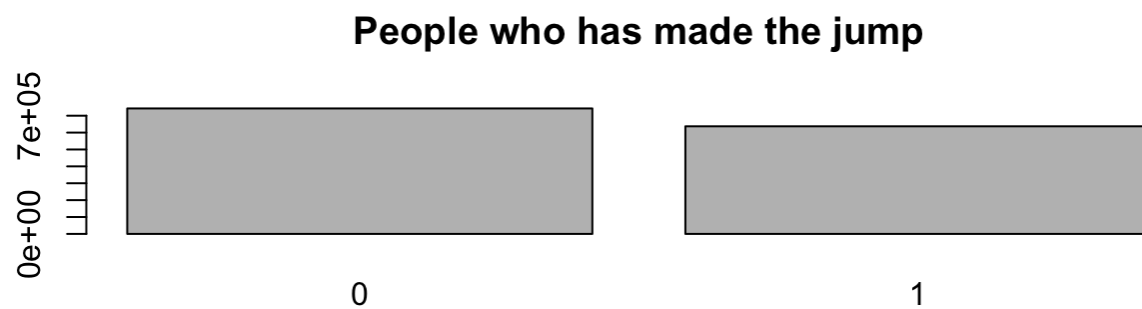
```
# Only small portion of people made gifts on "Giving Day"
table(d3k99k_jumped$IS_DONOR_APPEAL_GIVINGDAY)
```

```
##
##      0      1
## 1366234 13933
```

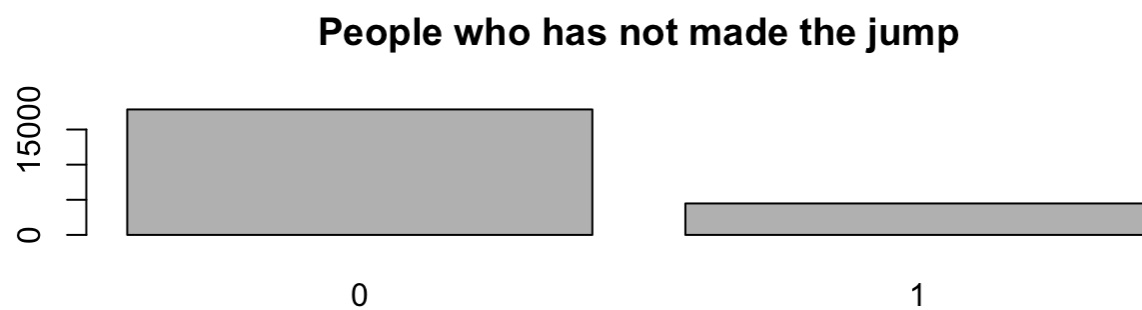
```
table(d3k99k_no_jump$IS_DONOR_APPEAL_GIVINGDAY)
```

```
##
##      0      1
## 22149  186
```

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_NEWDIGITAL), main = "People who has made the jump",
  sub = "1 = Made Gift through a newer digital channel")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_NEWDIGITAL), main = "People who has not made the jump",
  sub = "0 = Never made gift through a newer digital channel")
```

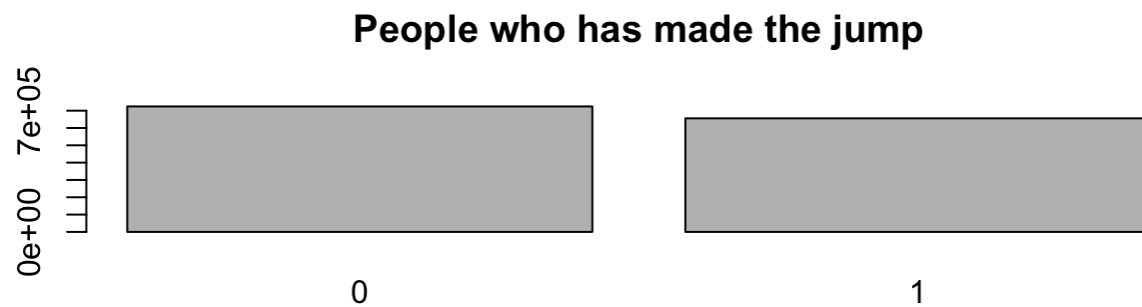



1 = Made Gift through a newer digital channel

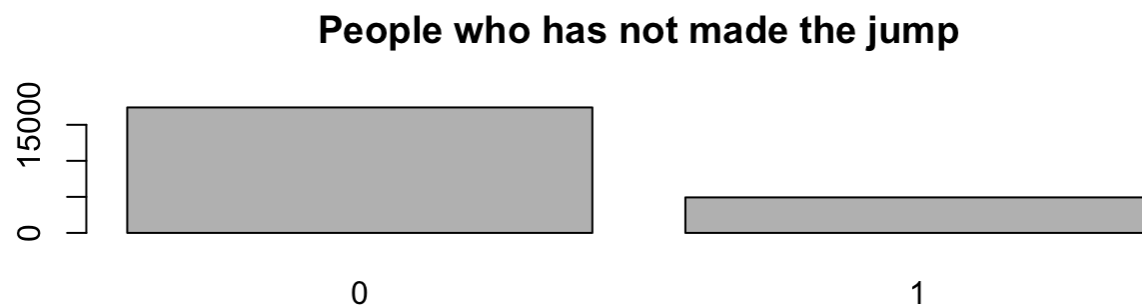


0 = Never made gift through a newer digital channel

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_EVENT), main = "People who has made the jump", sub =
"1 = Made an Event Gift")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_EVENT), main = "People who has not made the jump",
sub = "0 = Never made an Event Gift")
```

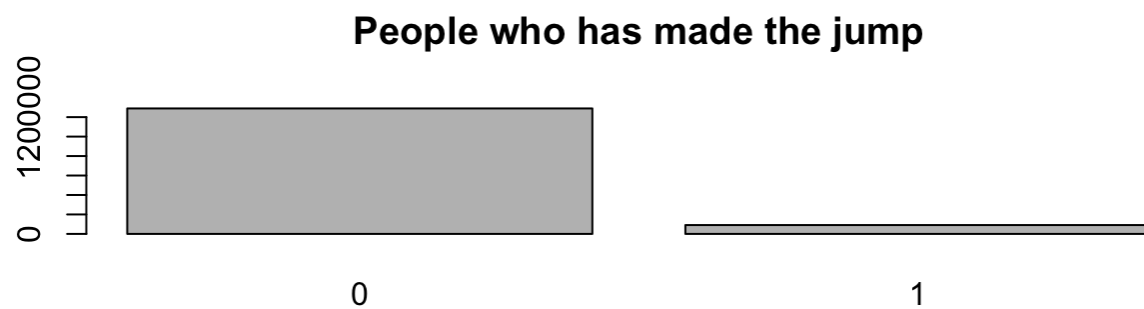


1 = Made an Event Gift

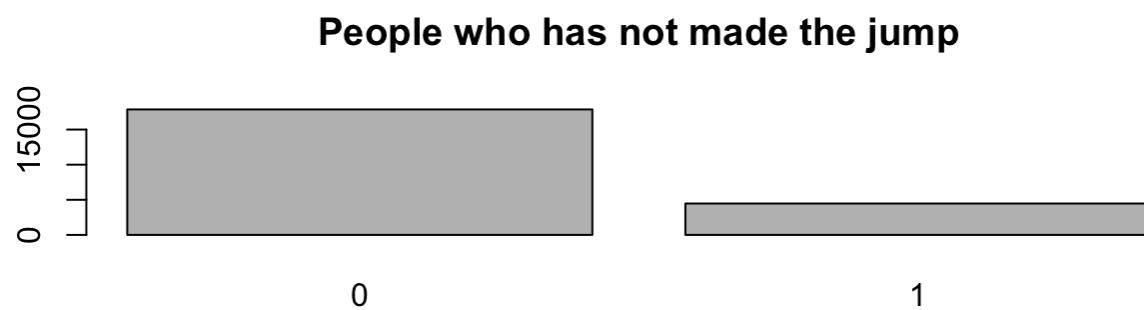


0 = Never made an Event Gift

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_OSUEMPLCMPN), main = "People who has made the jump",
sub = "1 = Made Gift through employee campaign")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_OSUEMPLCMPN), main = "People who has not made the j
ump", sub = "0 = Never made Gift through employee campaign")
```

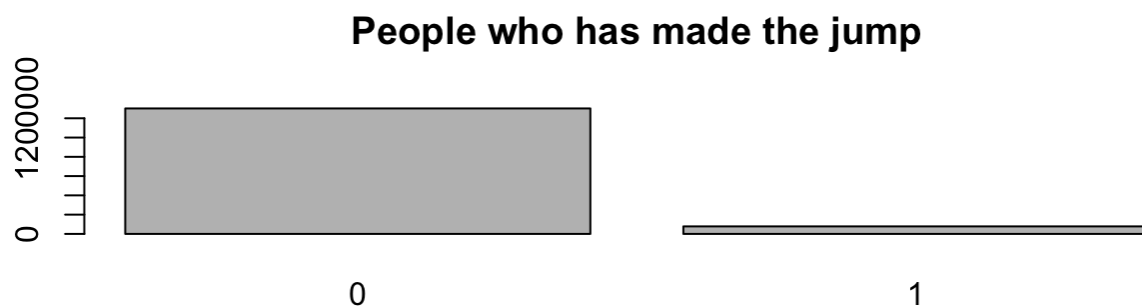


1 = Made Gift through employee campaign

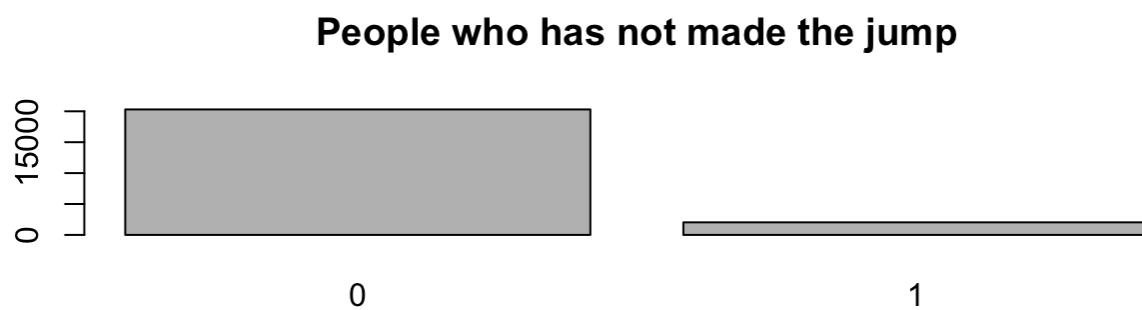


0 = Never made Gift through employee campaign

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_BIG6), main = "People who has made the jump", sub =
"1 = Made Gift through Big 6")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_BIG6), main = "People who has not made the jump", s
ub = "0 = Never made Gift through Big 6")
```



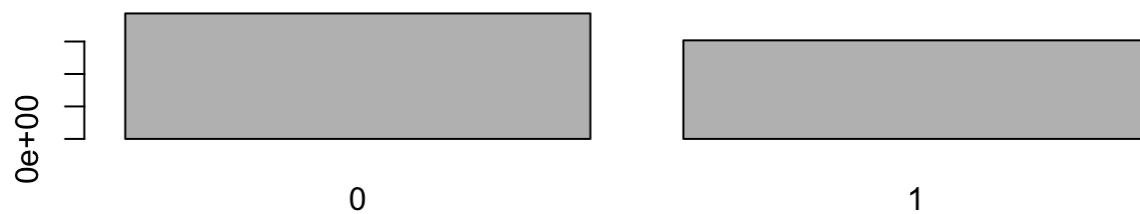
1 = Made Gift through Big 6



0 = Never made Gift through Big 6

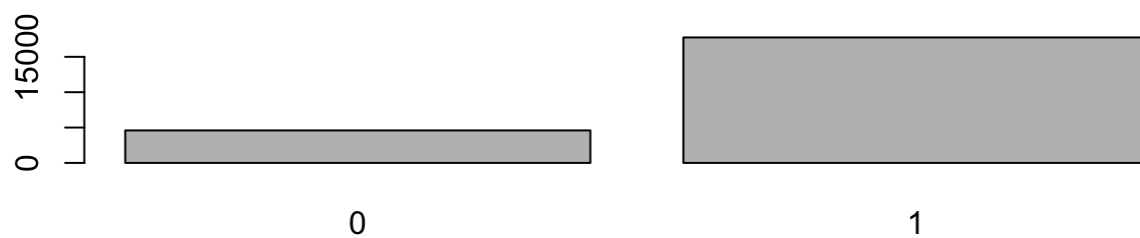
```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_AG), main = "People who has made the jump", sub = "1
= Made Gift through Annual Giving's appeal codes")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_AG), main = "People who has not made the jump", sub
= "0 = Never made Gift through Annual Giving's appeal codes")
```

People who has made the jump



1 = Made Gift through Annual Giving's appeal codes

People who has not made the jump



0 = Never made Gift through Annual Giving's appeal codes

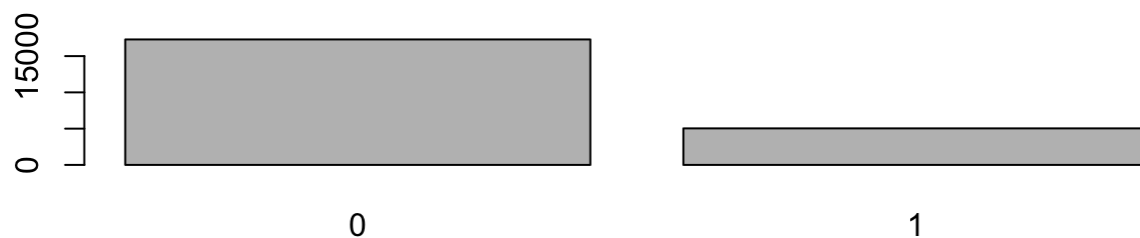
```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_TRIBUTE_EVER), main = "People who has made the jump", sub =
"1 = Made Tribute or Momerial Gift")
barplot(table(d3k99k_no_jump$IS_DONOR_TRIBUTE_EVER), main = "People who has not made the jump",
sub = "0 = Never made Tribute or Momerial Gift")
```

People who has made the jump



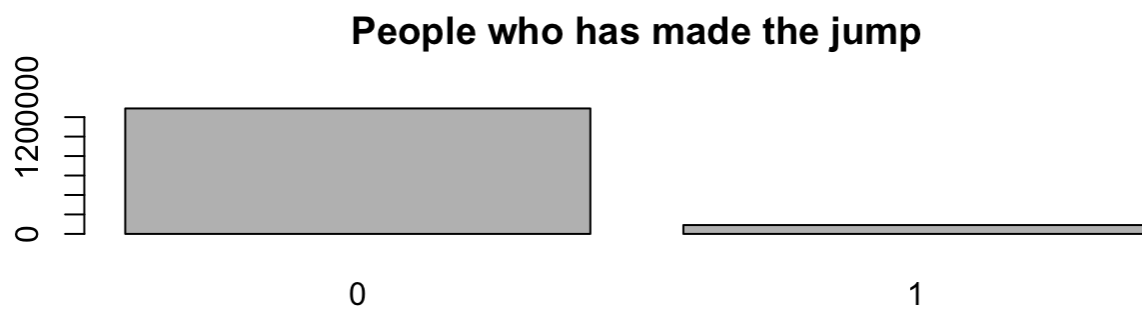
1 = Made Tribute or Momerial Gift

People who has not made the jump

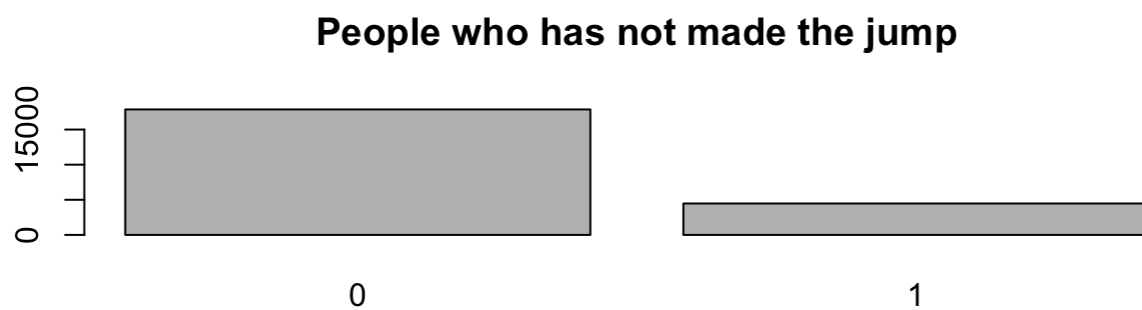


0 = Never made Tribute or Momerial Gift

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_OSUEMPLCMPN), main = "People who has made the jump",
sub = "1 = Made Gift through employee campaign")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_OSUEMPLCMPN), main = "People who has not made the j
ump", sub = "0 = Never made Gift through employee campaign")
```

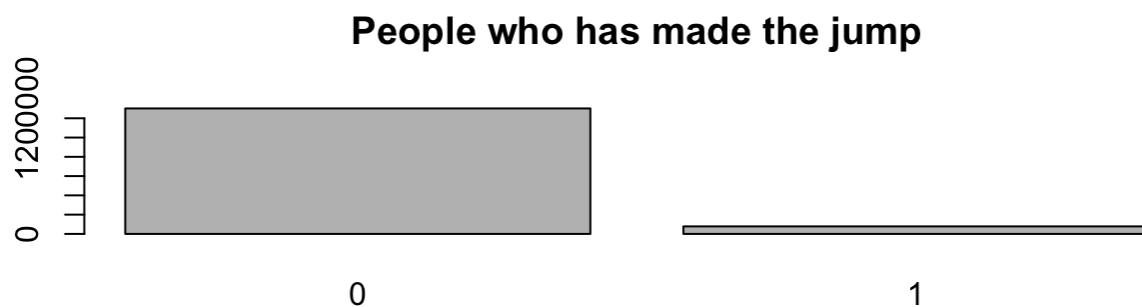


1 = Made Gift through employee campaign

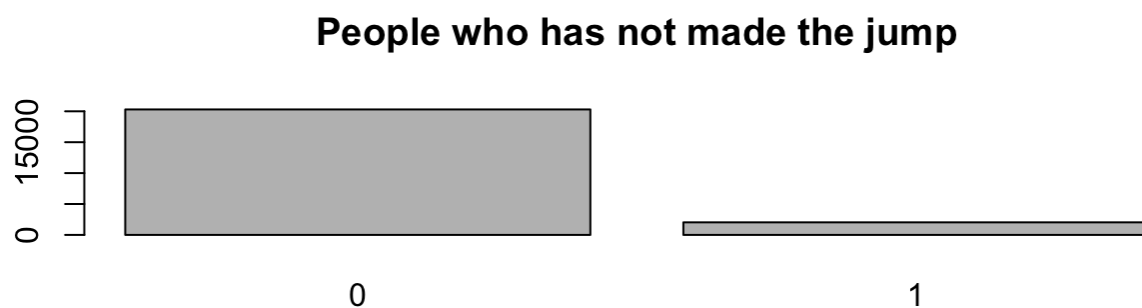


0 = Never made Gift through employee campaign

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_BIG6), main = "People who has made the jump", sub =
"1 = Made Gift through Big 6")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_BIG6), main = "People who has not made the jump", s
ub = "0 = Never made Gift through Big 6")
```



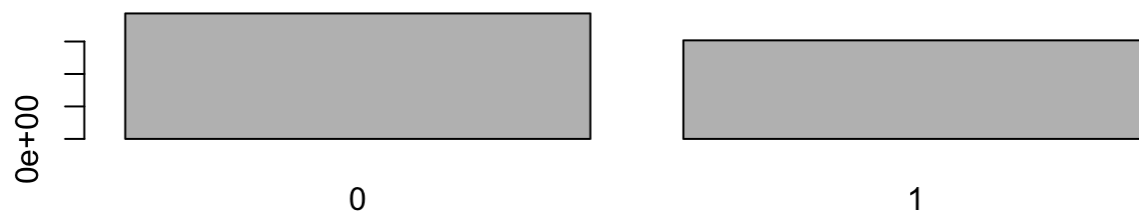
1 = Made Gift through Big 6



0 = Never made Gift through Big 6

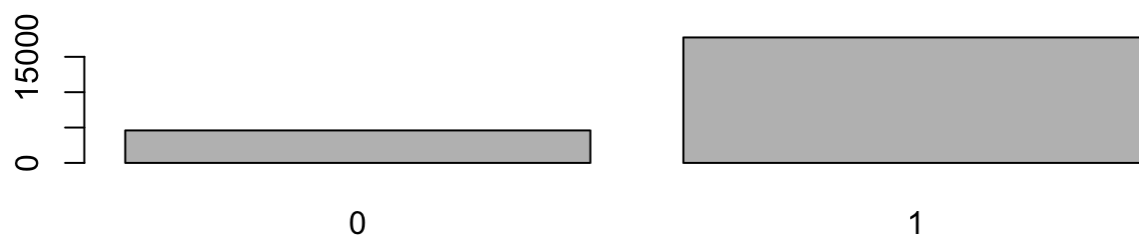
```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_APPEAL_AG), main = "People who has made the jump", sub = "1
= Made Gift through Annual Giving's appeal codes")
barplot(table(d3k99k_no_jump$IS_DONOR_APPEAL_AG), main = "People who has not made the jump", sub
= "0 = Never made Gift through Annual Giving's appeal codes")
```


People who has made the jump



1 = Made Gift through Annual Giving's appeal codes

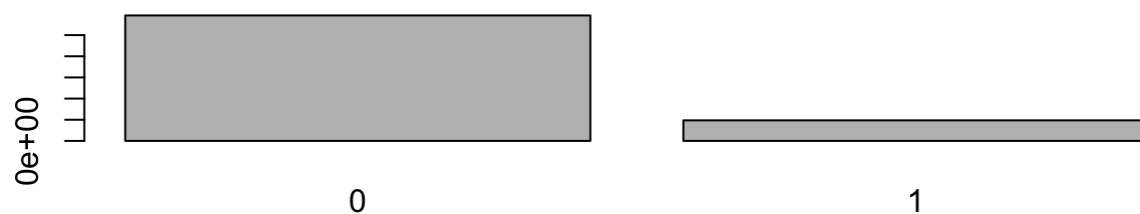
People who has not made the jump



0 = Never made Gift through Annual Giving's appeal codes

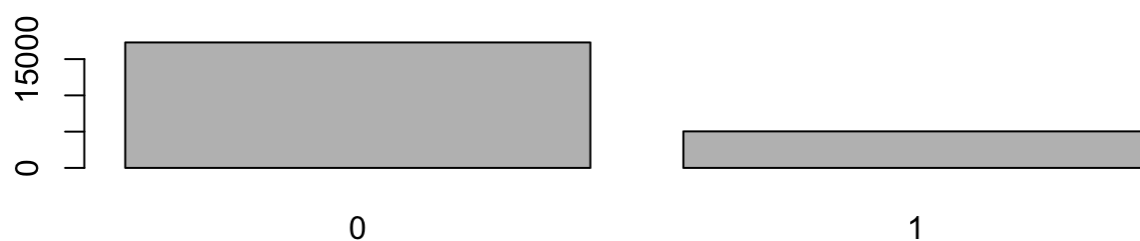
```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_TRIBUTE_EVER), main = "People who has made the jump", sub =
"1 = Made Tribute or Momerial Gift")
barplot(table(d3k99k_no_jump$IS_DONOR_TRIBUTE_EVER), main = "People who has not made the jump",
sub = "0 = Never made Tribute or Momerial Gift")
```

People who has made the jump



1 = Made Tribute or Momerial Gift

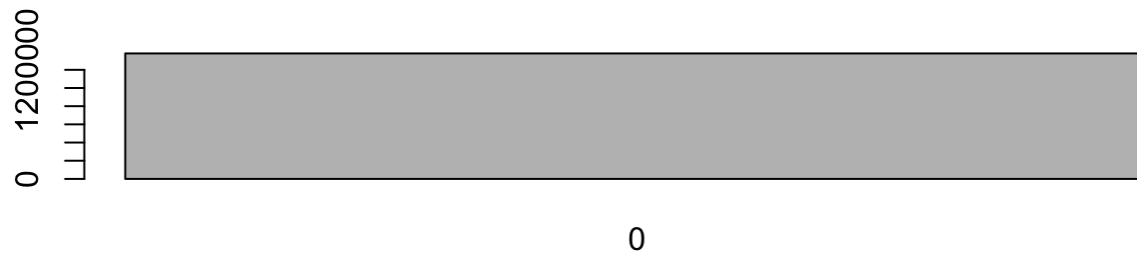
People who has not made the jump



0 = Never made Tribute or Momerial Gift

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_PAY_THRU_PRACTICECREDIT), main = "People who has made the j
ump", sub = "1 = Made Gift through Practice Credit")
barplot(table(d3k99k_no_jump$IS_DONOR_PAY_THRU_PRACTICECREDIT), main = "People who has not made
the jump", sub = "0 = Never made Gift through Annual Giving's appeal codes")
```

People who has made the jump



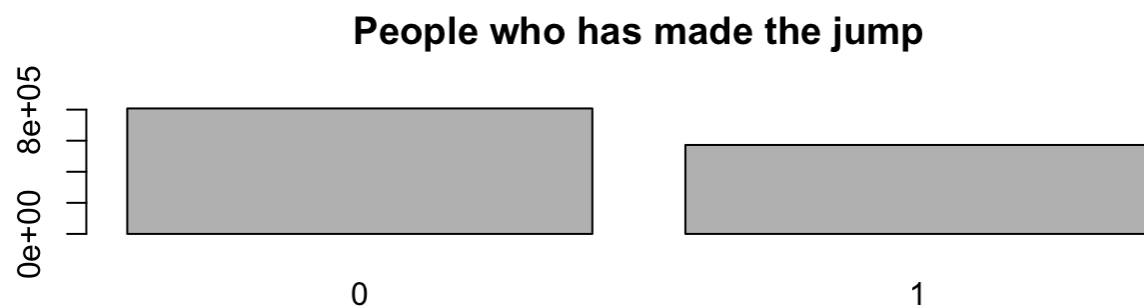
1 = Made Gift through Practice Credit

People who has not made the jump

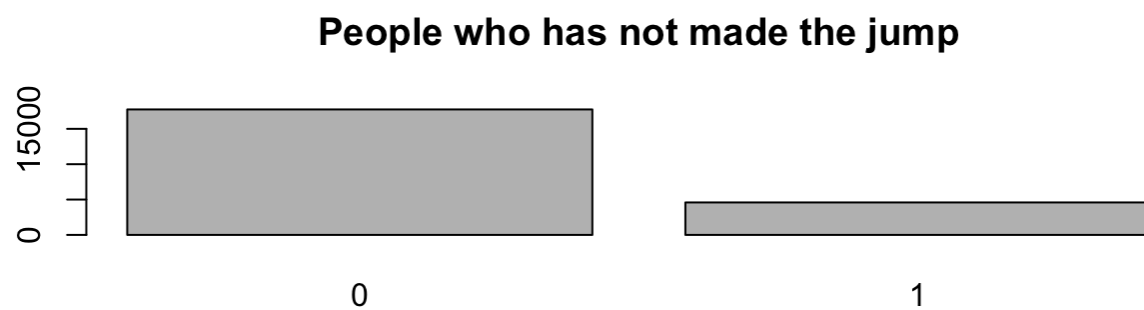


0 = Never made Gift through Annual Giving's appeal codes

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_TO_PEL_EVER), main = "People who has made the jump", sub =
"1 = Has Given to Pelotonia")
barplot(table(d3k99k_no_jump$IS_DONOR_TO_PEL_EVER), main = "People who has not made the jump", s
ub = "0 = Has never Given to Pelotonia")
```



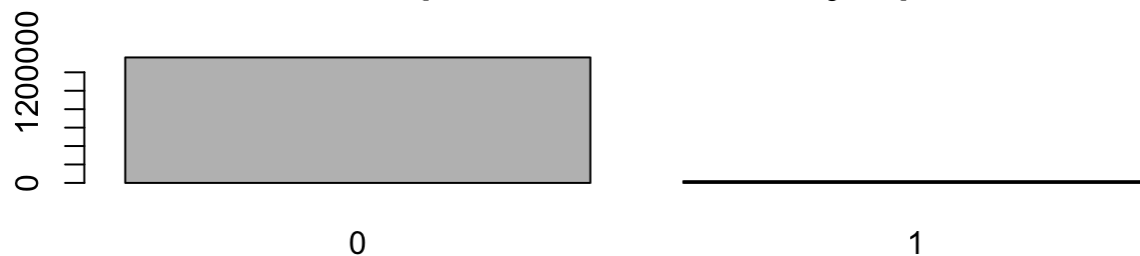
1 = Has Given to Pelotonia



0 = Has never Given to Pelotonia

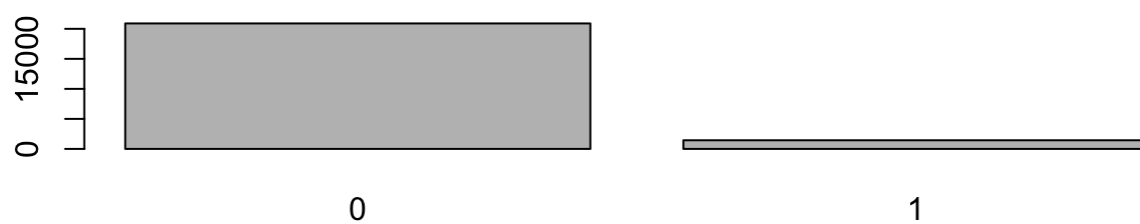
```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_TO_WCA_EVER), main = "People who has made the jump", sub =
"1 = Made Wexner Arts Museum Donor")
barplot(table(d3k99k_no_jump$IS_DONOR_TO_WCA_EVER), main = "People who has not made the jump", s
ub = "0 = Never made Wexner Arts Museum Donor")
```

People who has made the jump



1 = Made Wexner Arts Museum Donor

People who has not made the jump



0 = Never made Wexner Arts Museum Donor

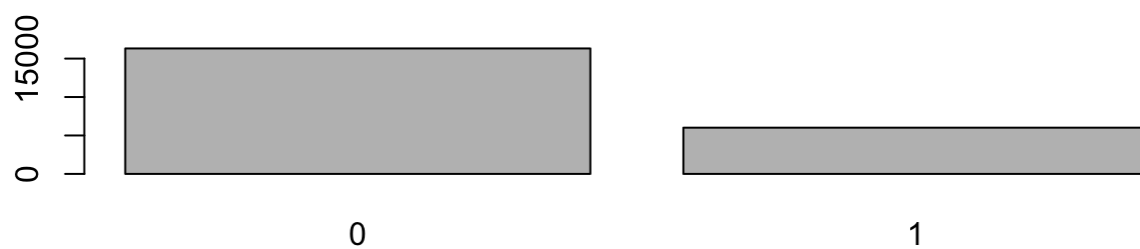
```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_TO_WOSU_EVER), main = "People who has made the jump", sub =
"1 = Made Gift to WOSU")
barplot(table(d3k99k_no_jump$IS_DONOR_TO_WOSU_EVER), main = "People who has not made the jump",
sub = "0 = Never made Gift to WOSU")
```

People who has made the jump



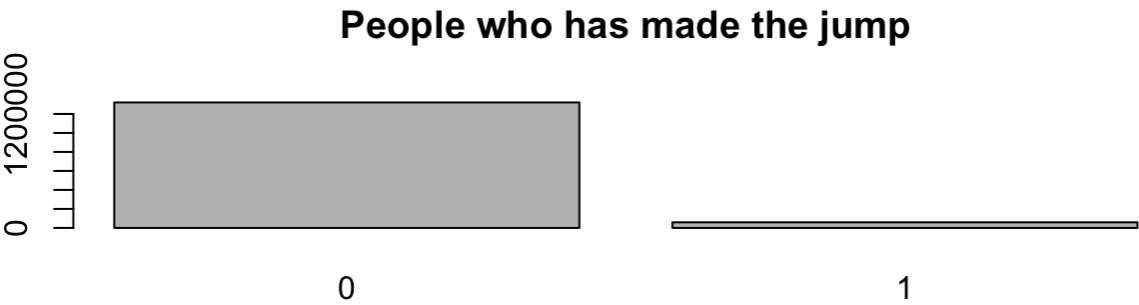
1 = Made Gift to WOSU

People who has not made the jump

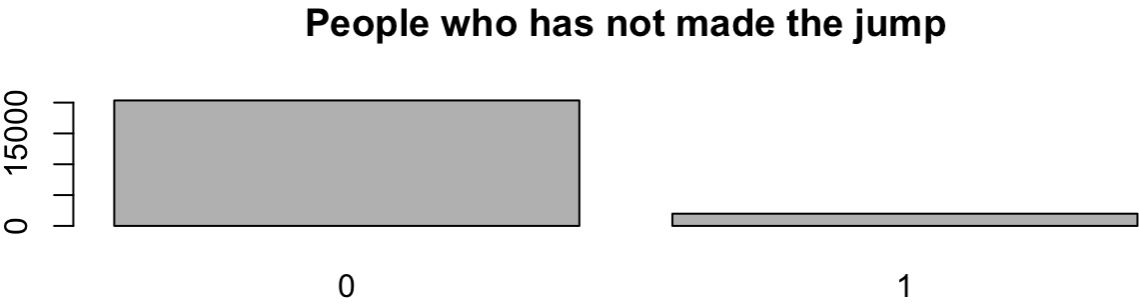


0 = Never made Gift to WOSU

```
par(mfrow = c(2,1))
barplot(table(d3k99k_jumped$IS_DONOR_TO_LICPLATE_EVER), main = "People who has made the jump", sub = "1 = Made Gift to license plate fund")
barplot(table(d3k99k_no_jump$IS_DONOR_TO_LICPLATE_EVER), main = "People who has not made the jump", sub = "0 = Never made Gift to license plate fund")
```



1 = Made Gift to license plate fund



0 = Never made Gift to license plate fund