Final Project - Setup

Experiments and Causality

March 15, 2018

```
download_path = "/Users/nisnair/Desktop/MIDS/Coursework/Term5/W241/Assignments/FinalProj

#Randomize the index with 1 or 0
randomize <- function() {
  sample(c(rep(0,20),rep(1,20)))
}

assign_attributes <- function(company_id,company,stagger){
  good <- company_id*company
  bad <- company_id*(1-company)
  stagger_good <- stagger[which(good > 0)]
  stagger_bad  <- stagger[which(bad > 0)]

  return (data.frame(good = good[good != 0],
                     bad = bad[bad != 0],
                     stagger_good = stagger_good,
                     stagger_bad = stagger_bad))
}

#Get assignments for users in CA
company_id_ca <- c(1:40)
random_ca <- randomize()
stagger_ca <- randomize()

user_1 = assign_attributes(company_id_ca,random_ca,stagger_ca)
write.table(user_1,paste(download_path,"/user1.txt",sep=""), sep="\t")

user_2 = assign_attributes(company_id_ca,(1-random_ca),(1-stagger_ca))
write.table(user_2, paste(download_path,"/user2.txt",sep=""), sep="\t")

#Get assignments for users in NY
random_ny <- randomize()
stagger_ny <- randomize()
company_id_ny <- c(41:80)

user_3 = assign_attributes(company_id_ny,random_ny,stagger_ny)
write.table(user_3, paste(download_path,"/user3.txt",sep=""), sep="\t")
```

```
user_4 = assign_attributes(company_id_ny,(1-random_ny),(1-stagger_ny))
write.table(user_4, paste(download_path,"/user4.txt",sep=""), sep="\t")

user_1
```

```
##    good bad stagger_good stagger_bad
## 1     1   3            0           1
## 2     2   5            1           0
## 3     4   6            1           1
## 4     7  14            0           1
## 5     8  15            0           1
## 6     9  17            0           1
## 7    10  18            0           0
## 8    11  20            1           0
## 9    12  21            0           0
## 10   13  24            0           1
## 11   16  26            1           1
## 12   19  27            1           0
## 13   22  29            1           0
## 14   23  30            0           0
## 15   25  31            0           0
## 16   28  32            1           1
## 17   34  33            0           0
## 18   36  35            0           1
## 19   38  37            1           1
## 20   39  40            1           1
```

```
user_2
```

```
##    good bad stagger_good stagger_bad
## 1     3   1            0           1
## 2     5   2            1           0
## 3     6   4            0           0
## 4    14   7            0           1
## 5    15   8            0           1
## 6    17   9            0           1
## 7    18  10            1           1
## 8    20  11            1           0
## 9    21  12            1           1
## 10   24  13            0           1
## 11   26  16            0           0
## 12   27  19            1           0
## 13   29  22            1           0
## 14   30  23            1           1
## 15   31  25            1           1
```

```
## 16   32  28            0           0
## 17   33  34            1           1
## 18   35  36            0           1
## 19   37  38            0           0
## 20   40  39            0           0
```

```
user_3
```

```
##    good bad stagger_good stagger_bad
## 1    41  44            1           0
## 2    42  45            1           0
## 3    43  46            0           0
## 4    47  48            1           1
## 5    49  51            0           1
## 6    50  55            1           1
## 7    52  58            1           1
## 8    53  59            1           0
## 9    54  60            0           1
## 10   56  62            1           0
## 11   57  64            1           0
## 12   61  65            0           0
## 13   63  70            1           1
## 14   66  71            1           0
## 15   67  74            1           1
## 16   68  75            0           1
## 17   69  77            0           0
## 18   72  78            0           1
## 19   73  79            0           0
## 20   76  80            0           0
```

```
user_4
```

```
##    good bad stagger_good stagger_bad
## 1    44  41            1           0
## 2    45  42            1           0
## 3    46  43            1           1
## 4    48  47            0           0
## 5    51  49            0           1
## 6    55  50            0           0
## 7    58  52            0           0
## 8    59  53            1           0
## 9    60  54            0           1
## 10   62  56            1           0
## 11   64  57            1           0
## 12   65  61            1           1
## 13   70  63            0           0
```

```
## 14   71  66            1            0
## 15   74  67            0            0
## 16   75  68            0            1
## 17   77  69            1            1
## 18   78  72            0            1
## 19   79  73            1            1
## 20   80  76            1            1
```