EDA - Stat 3302 Project

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Whether Bonds gets on base

```
bonds$success <- as.numeric(bonds$result != 0)

bonds$onbase <- bonds$first + bonds$second + bonds$third
bonds$inningcap <- ifelse(bonds$inning >= 10, 10, bonds$inning)
bonds$appearancecap <- ifelse(bonds$appearance >= 5, 5, bonds$appearance)
bonds$erarange <- floor(bonds$era)

home <- count_successes(bonds$success, bonds$home, "home")
first <- count_successes(bonds$success, bonds$first, "first")
second <- count_successes(bonds$success, bonds$second, "second")
third <- count_successes(bonds$success, bonds$third, "third")
onbase <- count_successes(bonds$success, bonds$onbase, "onbase")
outs <- count_successes(bonds$success, bonds$outs, "outs")
inning <- count_successes(bonds$success, bonds$inningcap, "inningcap")
appearance <- count_successes(bonds$success, bonds$appearancecap, "appearancecap")
era <- count_successes(bonds$success, bonds$erarange, "erarange")

homep <- percent_successes(home)
firstp <- percent_successes(first)
secondp <- percent_successes(second)
thirdp <- percent_successes(third)
onbasep <- percent_successes(onbase)
outsp <- percent_successes(outs)
inningp <- percent_successes(inning)
appearancep <- percent_successes(appearance)
erap <- percent_successes(era)
```

Is it a home game?

```
##   home success failure total
## 1    0     174     164   338
## 2    1     159     151   310
```

```
##   home success failure total
## 1    0    0.51    0.49   338
## 2    1    0.51    0.49   310
```

Is someone on first base?

```
##   first success failure total
## 1     0     213     213   426
## 2     1     120     102   222
```

```
##   first success failure total
## 1     0    0.50    0.50   426
## 2     1    0.54    0.46   222
```

Is someone on second base?

```
##   second success failure total
## 1      0     261     278   539
## 2      1      72      37   109
```

```
##   second success failure total
## 1      0    0.48    0.52   539
## 2      1    0.66    0.34   109
```

Is someone on third base?

```
##   third success failure total
## 1     0     299     293   592
## 2     1      34      22    56
```

```
##   third success failure total
## 1     0    0.51    0.49   592
## 2     1    0.61    0.39    56
```

How many people are on base?

```
##   onbase success failure total
## 1      0     159     191   350
## 2      1     128      90   218
## 3      2      40      31    71
## 4      3       6       3     9
```

```
##   onbase success failure total
## 1      0    0.45    0.55   350
## 2      1    0.59    0.41   218
## 3      2    0.56    0.44    71
## 4      3    0.67    0.33     9
```

How many outs are there?

```
##   outs success failure total
## 1    0      80      96   176
## 2    1     123     109   232
## 3    2     130     110   240
```

```
##   outs success failure total
## 1    0    0.45    0.55   176
## 2    1    0.53    0.47   232
## 3    2    0.54    0.46   240
```

What inning is it?

```
##    inningcap success failure total
## 1          1      84      58   142
## 2          2      12       3    15
## 3          3      42      46    88
## 4          4      35      28    63
## 5          5      38      32    70
## 6          6      28      44    72
## 7          7      24      35    59
## 8          8      41      38    79
## 9          9      18      21    39
## 10        10      11      10    21
```

```
##    inningcap success failure total
## 1          1    0.59    0.41   142
## 2          2    0.80    0.20    15
## 3          3    0.48    0.52    88
## 4          4    0.56    0.44    63
## 5          5    0.54    0.46    70
## 6          6    0.39    0.61    72
## 7          7    0.41    0.59    59
## 8          8    0.52    0.48    79
## 9          9    0.46    0.54    39
## 10        10    0.52    0.48    21
```

What appearance is it for bonds?

```
##   appearancecap success failure total
## 1             1      89      61   150
## 2             2      75      69   144
## 3             3      69      75   144
## 4             4      64      70   134
## 5             5      36      40    76
```

```
##   appearancecap success failure total
## 1             1    0.59    0.41   150
## 2             2    0.52    0.48   144
## 3             3    0.48    0.52   144
## 4             4    0.48    0.52   134
## 5             5    0.47    0.53    76
```

What's the opposing pitcher's era?

```
##   erarange success failure total
## 1        2       6      12    18
## 2        3      98      86   184
## 3        4     163     155   318
## 4        5      59      56   115
## 5        6       6       5    11
```

```
##   erarange success failure total
## 1        2    0.33    0.67    18
## 2        3    0.53    0.47   184
## 3        4    0.51    0.49   318
## 4        5    0.51    0.49   115
## 5        6    0.55    0.45    11
```