Final Project - Predicting March Madness

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```
library(tidyverse)
library(tidymodels)
library(Stat2Data)
library(caret)
library(leaps)
library(MASS)

cbb <- read_csv("data/cbb.csv")

#Remove non-postseason teams and R68 losers
cbb <- cbb[!is.na(cbb$POSTSEASON),]
cbb <- filter(cbb, !grepl("R68", POSTSEASON))

#Cleaning up variable names, variables, etc
cbb$POSTSEASON <- str_trim(cbb$POSTSEASON, side = c("both"))
cbb <- rename(cbb, march_madness = POSTSEASON)

cbb <- cbb |>
  mutate(march_madness = case_when(
    march_madness == "Sweet Sixteen" ~ "S16",
    march_madness == "Elite Eight" ~ "E8",
    march_madness == "Final Four" ~ "F4",
    march_madness == "Finals" ~ "2ND",
    march_madness == "CHAMPS" ~ "Champions",
    TRUE ~ march_madness
  ))
```

```
#separated each row by round for determining differences
cbb <- mutate(cbb, round_64 = if_else(march_madness == "R64", FALSE, TRUE))
round_64 <- cbb
```

```r
cbb <- mutate(cbb, round_32 =
         case_when(march_madness == "R32" ~ FALSE,
         march_madness %in% c("S16", "E8", "F4", "2ND", "Champions") ~ TRUE,
         TRUE ~ NA))
round_32 <- cbb[!is.na(cbb$round_32),]

cbb <- mutate(cbb, sweet_sixteen =
         case_when(march_madness == "S16" ~ FALSE,
         march_madness %in% c("E8", "F4", "2ND", "Champions") ~ TRUE,
         TRUE ~ NA))
sweet_sixteen <- cbb[!is.na(cbb$sweet_sixteen),]

cbb <- mutate(cbb, elite_eight =
         case_when(march_madness == "E8" ~ FALSE,
         march_madness %in% c("F4", "2ND", "Champions") ~ TRUE,
         TRUE ~ NA))
elite_eight <- cbb[!is.na(cbb$elite_eight),]

cbb <- mutate(cbb, final_four =
         case_when(march_madness == "F4" ~ FALSE,
         march_madness %in% c("2ND", "Champions") ~ TRUE,
         TRUE ~ NA))
final_four <- cbb[!is.na(cbb$final_four),]

cbb <- mutate(cbb, champ_game =
         case_when(march_madness == "2ND" ~ FALSE,
         march_madness %in% c("Champions") ~ TRUE,
         TRUE ~ NA))
champ_game <- cbb[!is.na(cbb$champ_game),]
```

```r
round_64_model <- glm(round_64 ~ ADJOE + ADJDE + `EFG%` +
                        `EFGD%` + TOR + TORD + ORB +
                       DRB + FTR + FTRD + `2P%` +
                       `2P%D` + `3P%` + `ADJ T.`,
                      data = round_64,
                      family = "binomial")

round_64_min <- glm(round_64 ~ 1,
                    data = round_64,
                    family = "binomial")
```

```r
stepAIC(round_64_min,
        scope = list(lower = round_64_min, upper = round_64_model),
        data = round_64, direction = "both")
```

```
Start:  AIC=889.23
round_64 ~ 1

           Df Deviance    AIC
+ ADJOE     1   745.58 749.58
+ ADJDE     1   748.66 752.66
+ `EFGD%`   1   852.37 856.37
+ `2P%D`    1   863.10 867.10
+ TOR       1   867.23 871.23
+ ORB       1   869.63 873.63
+ `EFG%`    1   874.24 878.24
+ `2P%`     1   874.95 878.95
+ FTRD      1   877.05 881.05
+ FTR       1   882.54 886.54
+ `3P%`     1   882.58 886.58
+ TORD      1   883.84 887.84
<none>          887.23 889.23
+ `ADJ T.`  1   886.55 890.55
+ DRB       1   886.80 890.80

Step:  AIC=749.58
round_64 ~ ADJOE

           Df Deviance    AIC
+ ADJDE     1   633.57 639.57
+ `EFGD%`   1   700.73 706.73
+ TORD      1   721.45 727.45
+ `2P%D`    1   722.31 728.31
+ `3P%`     1   727.36 733.36
+ `EFG%`    1   731.12 737.12
+ `2P%`     1   741.68 747.68
+ `ADJ T.`  1   742.04 748.04
+ ORB       1   742.31 748.31
<none>          745.58 749.58
+ FTR       1   743.83 749.83
+ TOR       1   744.14 750.14
+ DRB       1   744.28 750.28
+ FTRD      1   744.43 750.43
```

```
- ADJOE     1   887.23 889.23

Step:  AIC=639.57
round_64 ~ ADJOE + ADJDE

           Df Deviance    AIC
+ DRB       1   626.48 634.48
+ TORD      1   630.67 638.67
+ `2P%D`    1   631.14 639.14
<none>          633.57 639.57
+ `3P%`     1   633.04 641.04
+ TOR       1   633.09 641.09
+ `EFGD%`   1   633.20 641.20
+ ORB       1   633.29 641.29
+ FTR       1   633.49 641.49
+ `ADJ T.`  1   633.52 641.52
+ `EFG%`    1   633.53 641.53
+ `2P%`     1   633.54 641.54
+ FTRD      1   633.54 641.54
- ADJDE     1   745.58 749.58
- ADJOE     1   748.66 752.66

Step:  AIC=634.48
round_64 ~ ADJOE + ADJDE + DRB

           Df Deviance    AIC
+ `2P%D`    1   623.01 633.01
<none>          626.48 634.48
+ ORB       1   624.98 634.98
+ `2P%`     1   625.03 635.03
+ TOR       1   625.06 635.06
+ `EFGD%`   1   625.36 635.36
+ FTR       1   625.46 635.46
+ FTRD      1   625.46 635.46
+ `EFG%`    1   625.66 635.66
+ TORD      1   626.24 636.24
+ `ADJ T.`  1   626.39 636.39
+ `3P%`     1   626.43 636.43
- DRB       1   633.57 639.57
- ADJOE     1   741.75 747.75
- ADJDE     1   744.28 750.28

Step:  AIC=633.01
```

```
round_64 ~ ADJOE + ADJDE + DRB + `2P%D`

           Df Deviance    AIC
<none>          623.01 633.01
+ `2P%`     1   621.81 633.81
+ TOR       1   622.20 634.20
+ `EFG%`    1   622.26 634.26
+ FTRD      1   622.27 634.27
+ ORB       1   622.38 634.38
+ `EFGD%`   1   622.40 634.40
- `2P%D`    1   626.48 634.48
+ FTR       1   622.76 634.76
+ TORD      1   622.95 634.95
+ `ADJ T.`  1   622.99 634.99
+ `3P%`     1   623.01 635.01
- DRB       1   631.14 639.14
- ADJDE     1   721.03 729.03
- ADJOE     1   734.31 742.31


Call:  glm(formula = round_64 ~ ADJOE + ADJDE + DRB + `2P%D`, family = "binomial",
    data = round_64)

Coefficients:
(Intercept)        ADJOE        ADJDE          DRB       `2P%D`
   -1.12003      0.18617     -0.27140      0.09371      0.08000

Degrees of Freedom: 639 Total (i.e. Null);  635 Residual
Null Deviance:      887.2
Residual Deviance: 623  AIC: 633
```

```r
round_32_model <- glm(round_32 ~ ADJOE + ADJDE + `EFG%` +
                        `EFGD%` + TOR + TORD + ORB +
                       DRB + FTR + FTRD + `2P%` +
                       `2P%D` + `3P%` + `ADJ T.`,
                      data = round_32,
                      family = "binomial")

round_32_min <- glm(round_32 ~ 1,
                    data = round_32,
                    family = "binomial")
```

```r
stepAIC(round_32_min,
        scope = list(lower = round_32_min,
                     upper = round_32_model),
        data = round_32, direction = "both")
```

```
Start:  AIC=445.61
round_32 ~ 1

           Df Deviance    AIC
+ ADJOE     1   399.95 403.95
+ ADJDE     1   424.78 428.78
+ `EFG%`    1   434.30 438.30
+ `2P%`     1   435.62 439.62
+ FTRD      1   435.97 439.97
+ `3P%`     1   439.12 443.12
+ ORB       1   439.24 443.24
+ `EFGD%`   1   439.26 443.26
+ `2P%D`    1   439.63 443.63
+ TOR       1   439.76 443.76
<none>          443.61 445.61
+ FTR       1   443.31 447.31
+ `ADJ T.`  1   443.37 447.37
+ TORD      1   443.40 447.40
+ DRB       1   443.59 447.59

Step:  AIC=403.95
round_32 ~ ADJOE

           Df Deviance    AIC
+ ADJDE     1   370.97 376.97
+ `EFGD%`   1   391.59 397.59
+ `2P%D`    1   395.25 401.25
+ `3P%`     1   397.04 403.04
+ TORD      1   397.14 403.14
+ `EFG%`    1   397.80 403.80
<none>          399.95 403.95
+ FTRD      1   398.21 404.21
+ TOR       1   398.26 404.26
+ ORB       1   398.87 404.87
+ FTR       1   399.55 405.55
+ DRB       1   399.64 405.64
+ `2P%`     1   399.67 405.67
```

```
+ `ADJ T.`  1   399.92 405.92
- ADJOE     1   443.61 445.61

Step:  AIC=376.97
round_32 ~ ADJOE + ADJDE

           Df Deviance    AIC
+ DRB       1   368.40 376.40
<none>          370.97 376.97
+ `2P%D`    1   369.61 377.61
+ FTRD      1   369.88 377.88
+ `EFGD%`   1   370.09 378.09
+ `3P%`     1   370.53 378.53
+ `ADJ T.`  1   370.58 378.58
+ `EFG%`    1   370.67 378.67
+ FTR       1   370.67 378.67
+ TOR       1   370.69 378.69
+ ORB       1   370.92 378.92
+ `2P%`     1   370.96 378.96
+ TORD      1   370.97 378.97
- ADJDE     1   399.95 403.95
- ADJOE     1   424.78 428.78

Step:  AIC=376.4
round_32 ~ ADJOE + ADJDE + DRB

           Df Deviance    AIC
+ FTRD      1   366.21 376.21
<none>          368.40 376.40
+ `2P%D`    1   366.56 376.56
+ `EFGD%`   1   366.84 376.84
- DRB       1   370.97 376.97
+ TORD      1   367.34 377.34
+ FTR       1   367.65 377.65
+ ORB       1   367.88 377.88
+ `ADJ T.`  1   368.01 378.01
+ `3P%`     1   368.15 378.15
+ `2P%`     1   368.25 378.25
+ TOR       1   368.33 378.33
+ `EFG%`    1   368.40 378.40
- ADJDE     1   399.64 405.64
- ADJOE     1   424.42 430.42
```

```
Step:  AIC=376.21
round_32 ~ ADJOE + ADJDE + DRB + FTRD

           Df Deviance    AIC
<none>          366.21 376.21
- FTRD      1   368.40 376.40
+ `2P%D`    1   364.74 376.74
+ `EFGD%`   1   364.81 376.81
+ `3P%`     1   365.84 377.84
- DRB       1   369.88 377.88
+ `ADJ T.`  1   365.89 377.89
+ TORD      1   365.99 377.99
+ `EFG%`    1   366.04 378.04
+ FTR       1   366.06 378.06
+ TOR       1   366.08 378.08
+ ORB       1   366.16 378.16
+ `2P%`     1   366.20 378.20
- ADJDE     1   397.39 405.39
- ADJOE     1   415.73 423.73


Call:  glm(formula = round_32 ~ ADJOE + ADJDE + DRB + FTRD, family = "binomial",
    data = round_32)

Coefficients:
(Intercept)        ADJOE        ADJDE          DRB         FTRD
   -3.60830      0.18163     -0.19702      0.08740     -0.03527

Degrees of Freedom: 319 Total (i.e. Null);  315 Residual
Null Deviance:      443.6
Residual Deviance: 366.2    AIC: 376.2
```

```r
sweet_sixteen_model <- glm(sweet_sixteen ~ ADJOE + ADJDE +
                             `EFG%` + `EFGD%` + TOR + TORD +
                               ORB + DRB + FTR + FTRD + `2P%` +
                               `2P%D` + `3P%` + `ADJ T.`,
                           data = sweet_sixteen,
                           family = "binomial")

sweet_sixteen_min <- glm(sweet_sixteen ~ 1,
                         data = sweet_sixteen,
                         family = "binomial")
```

```r
stepAIC(sweet_sixteen_min,
        scope = list(lower = sweet_sixteen_min,
                     upper = sweet_sixteen_model),
        data = sweet_sixteen, direction = "both")
```

```
Start:  AIC=223.81
sweet_sixteen ~ 1

           Df Deviance    AIC
+ ADJOE     1   211.57 215.57
+ ADJDE     1   214.56 218.56
+ `EFGD%`   1   217.95 221.95
+ `2P%D`    1   218.79 222.79
+ TOR       1   219.13 223.13
+ `2P%`     1   219.37 223.37
+ `EFG%`    1   219.64 223.64
<none>          221.81 223.81
+ ORB       1   220.62 224.62
+ `ADJ T.`  1   221.34 225.34
+ TORD      1   221.56 225.56
+ `3P%`     1   221.57 225.57
+ FTRD      1   221.59 225.59
+ FTR       1   221.62 225.62
+ DRB       1   221.73 225.73

Step:  AIC=215.57
sweet_sixteen ~ ADJOE

           Df Deviance    AIC
+ ADJDE     1   198.30 204.30
+ `EFGD%`   1   205.52 211.52
+ `2P%D`    1   208.10 214.10
+ `3P%`     1   208.81 214.81
+ TORD      1   208.91 214.91
<none>          211.57 215.57
+ `EFG%`    1   210.33 216.33
+ `ADJ T.`  1   210.68 216.68
+ ORB       1   210.88 216.88
+ FTRD      1   211.16 217.16
+ DRB       1   211.17 217.17
+ FTR       1   211.24 217.24
```

```
+ `2P%`      1   211.45 217.45
+ TOR        1   211.57 217.57
- ADJOE      1   221.81 223.81

Step:  AIC=204.3
sweet_sixteen ~ ADJOE + ADJDE

            Df Deviance    AIC
+ DRB        1   195.97 203.97
<none>           198.30 204.30
+ `3P%`      1   197.51 205.51
+ `EFG%`     1   197.54 205.54
+ `ADJ T.`   1   197.72 205.72
+ `2P%`      1   197.92 205.92
+ FTRD       1   197.95 205.95
+ `2P%D`     1   197.99 205.99
+ TOR        1   198.05 206.05
+ FTR        1   198.18 206.18
+ TORD       1   198.18 206.18
+ `EFGD%`    1   198.26 206.26
+ ORB        1   198.30 206.30
- ADJDE      1   211.57 215.57
- ADJOE      1   214.56 218.56

Step:  AIC=203.97
sweet_sixteen ~ ADJOE + ADJDE + DRB

            Df Deviance    AIC
<none>           195.97 203.97
- DRB        1   198.30 204.30
+ TOR        1   195.31 205.31
+ `3P%`      1   195.32 205.32
+ `2P%D`     1   195.39 205.39
+ `ADJ T.`   1   195.42 205.42
+ `EFGD%`    1   195.65 205.65
+ TORD       1   195.68 205.68
+ ORB        1   195.73 205.73
+ `EFG%`     1   195.77 205.77
+ FTRD       1   195.90 205.90
+ `2P%`      1   195.95 205.95
+ FTR        1   195.96 205.96
- ADJDE      1   211.17 217.17
- ADJOE      1   213.87 219.87
```

```
Call:  glm(formula = sweet_sixteen ~ ADJOE + ADJDE + DRB, family = "binomial",
    data = sweet_sixteen)

Coefficients:
(Intercept)        ADJOE        ADJDE          DRB
    -2.1216       0.1480      -0.1896       0.0910

Degrees of Freedom: 159 Total (i.e. Null);  156 Residual
Null Deviance:      221.8
Residual Deviance: 196  AIC: 204
```

```
elite_eight_model <- glm(elite_eight ~ ADJOE + ADJDE +
                           `EFG%` + `EFGD%` + TOR + TORD +
                             ORB + DRB + FTR + FTRD + `2P%` +
                             `2P%D` + `3P%` + `ADJ T.`,
                         data = elite_eight,
                         family = "binomial")

elite_eight_min <- glm(elite_eight ~ 1,
                       data = elite_eight,
                       family = "binomial")

stepAIC(elite_eight_min,
        scope = list(lower = elite_eight_min,
                     upper = elite_eight_model),
        data = elite_eight, direction = "both")
```

```
Start:  AIC=112.9
elite_eight ~ 1

           Df Deviance    AIC
+ ADJDE     1   107.77 111.77
+ ADJOE     1   108.19 112.19
<none>          110.90 112.90
+ FTR       1   109.41 113.41
+ FTRD      1   109.64 113.64
+ `EFGD%`   1   109.85 113.85
+ `3P%`     1   110.15 114.15
+ `ADJ T.`  1   110.34 114.34
+ `2P%D`    1   110.56 114.56
```

```
+ `EFG%`     1   110.59 114.59
+ TOR        1   110.68 114.68
+ DRB        1   110.78 114.78
+ ORB        1   110.79 114.79
+ TORD       1   110.86 114.86
+ `2P%`      1   110.90 114.90

Step:  AIC=111.77
elite_eight ~ ADJDE

            Df Deviance    AIC
+ ADJOE      1   103.10 109.10
+ FTR        1   105.24 111.24
+ `3P%`      1   105.47 111.47
<none>           107.77 111.77
+ FTRD       1   105.78 111.78
+ `EFG%`     1   106.69 112.69
+ TOR        1   106.88 112.88
- ADJDE      1   110.90 112.90
+ `ADJ T.`   1   106.93 112.93
+ `2P%D`     1   107.20 113.20
+ TORD       1   107.30 113.30
+ `EFGD%`    1   107.60 113.60
+ DRB        1   107.75 113.75
+ `2P%`      1   107.76 113.76
+ ORB        1   107.77 113.77

Step:  AIC=109.1
elite_eight ~ ADJDE + ADJOE

            Df Deviance    AIC
+ `2P%`      1   100.34 108.34
<none>           103.10 109.10
+ FTR        1   101.20 109.20
+ `2P%D`     1   101.98 109.98
+ `ADJ T.`   1   102.21 110.21
+ `EFG%`     1   102.46 110.46
+ `EFGD%`    1   102.77 110.77
+ FTRD       1   102.80 110.80
+ `3P%`      1   102.81 110.81
+ ORB        1   102.94 110.94
+ TOR        1   102.97 110.97
+ DRB        1   103.05 111.05
```

```
+ TORD      1   103.07 111.07
- ADJOE     1   107.77 111.77
- ADJDE     1   108.19 112.19

Step:  AIC=108.34
elite_eight ~ ADJDE + ADJOE + `2P%`

           Df Deviance    AIC
+ FTR       1   97.503 107.50
<none>         100.343 108.34
+ FTRD      1   98.914 108.91
+ `2P%D`    1   98.943 108.94
+ ORB       1   98.961 108.96
- `2P%`     1  103.101 109.10
+ `EFG%`    1   99.729 109.73
+ `EFGD%`   1   99.815 109.81
+ `ADJ T.`  1  100.181 110.18
+ `3P%`     1  100.212 110.21
+ TORD      1  100.222 110.22
+ TOR       1  100.225 110.22
+ DRB       1  100.322 110.32
- ADJDE     1  106.197 112.20
- ADJOE     1  107.763 113.76

Step:  AIC=107.5
elite_eight ~ ADJDE + ADJOE + `2P%` + FTR

           Df Deviance    AIC
<none>          97.503 107.50
- FTR       1  100.343 108.34
+ ORB       1   96.851 108.85
+ FTRD      1   96.860 108.86
+ `2P%D`    1   97.032 109.03
+ TOR       1   97.089 109.09
- `2P%`     1  101.197 109.20
+ TORD      1   97.303 109.30
+ `ADJ T.`  1   97.305 109.31
+ `EFG%`    1   97.352 109.35
+ `EFGD%`   1   97.417 109.42
+ DRB       1   97.482 109.48
+ `3P%`     1   97.502 109.50
- ADJDE     1  104.627 112.63
- ADJOE     1  105.190 113.19
```

```
Call:  glm(formula = elite_eight ~ ADJDE + ADJOE + `2P%` + FTR, family = "binomial",
    data = elite_eight)

Coefficients:
(Intercept)        ADJDE        ADJOE        `2P%`          FTR
   10.68272     -0.19039      0.17180     -0.19025     -0.09283

Degrees of Freedom: 79 Total (i.e. Null);  75 Residual
Null Deviance:      110.9
Residual Deviance: 97.5     AIC: 107.5
```

```
final_four_model <- glm(final_four ~ ADJOE + ADJDE + `EFG%` +
                          `EFGD%` + TOR + TORD + ORB + DRB +
                          FTR + FTRD + `2P%` + `2P%D` +
                          `3P%` + `ADJ T.`,
                        data = final_four,
                        family = "binomial")

final_four_min <- glm(final_four ~ 1,
                      data = final_four,
                      family = "binomial")

stepAIC(final_four_min,
        scope = list(lower = final_four_min,
                     upper = final_four_model),
        data = final_four, direction = "both")
```

```
Start:  AIC=57.45
final_four ~ 1

           Df Deviance    AIC
+ `2P%`     1   48.649 52.649
+ ADJOE     1   48.973 52.973
+ `EFG%`    1   51.674 55.674
+ TOR       1   51.692 55.692
<none>          55.452 57.452
+ DRB       1   53.506 57.506
+ `ADJ T.`  1   54.135 58.135
+ FTRD      1   54.150 58.150
+ ADJDE     1   54.825 58.825
```

```
+ TORD      1   54.945 58.945
+ `2P%D`    1   55.035 59.035
+ `3P%`     1   55.337 59.337
+ FTR       1   55.425 59.425
+ ORB       1   55.439 59.439
+ `EFGD%`   1   55.452 59.452

Step:  AIC=52.65
final_four ~ `2P%`

           Df Deviance    AIC
<none>          48.649 52.649
+ ORB       1   46.858 52.858
+ ADJDE     1   46.995 52.995
+ ADJOE     1   47.100 53.100
+ `2P%D`    1   47.437 53.437
+ TOR       1   47.557 53.557
+ `EFG%`    1   47.814 53.814
+ FTR       1   47.881 53.881
+ `3P%`     1   48.162 54.162
+ `EFGD%`   1   48.379 54.379
+ `ADJ T.`  1   48.451 54.451
+ DRB       1   48.483 54.483
+ FTRD      1   48.488 54.488
+ TORD      1   48.645 54.645
- `2P%`     1   55.452 57.452


Call:  glm(formula = final_four ~ `2P%`, family = "binomial", data = final_four)

Coefficients:
(Intercept)        `2P%`
    -14.448        0.276

Degrees of Freedom: 39 Total (i.e. Null);  38 Residual
Null Deviance:      55.45
Residual Deviance: 48.65    AIC: 52.65
```

```r
champ_game_model <- glm(champ_game ~ ADJOE + ADJDE +
                          `EFG%` + `EFGD%` + TOR + TORD +
                          ORB + DRB + FTR + FTRD + `2P%` +
                          `2P%D` + `3P%` + `ADJ T.`,
```

```
                         data = champ_game,
                         family = "binomial")
```

```
Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
champ_game_min <- glm(champ_game ~ 1,
                      data = champ_game,
                      family = "binomial")

stepAIC(champ_game_min,
        scope = list(lower = champ_game_min,
                     upper = champ_game_model),
        data = champ_game, direction = "both")
```

```
Start:  AIC=29.73
champ_game ~ 1

           Df Deviance    AIC
+ `3P%`     1   23.552 27.552
+ DRB       1   23.790 27.790
+ TORD      1   25.449 29.449
<none>          27.726 29.726
+ ADJOE     1   26.521 30.521
+ ORB       1   27.224 31.224
+ TOR       1   27.227 31.227
+ `2P%D`    1   27.422 31.422
+ `2P%`     1   27.440 31.440
+ FTR       1   27.520 31.520
+ ADJDE     1   27.523 31.523
+ `ADJ T.`  1   27.574 31.574
+ FTRD      1   27.583 31.583
+ `EFG%`    1   27.589 31.589
+ `EFGD%`   1   27.721 31.721

Step:  AIC=27.55
champ_game ~ `3P%`

           Df Deviance    AIC
+ DRB       1   18.472 24.472
+ TORD      1   20.227 26.227
```

```
+ ORB        1   20.229 26.229
+ TOR        1   21.289 27.289
<none>           23.552 27.552
+ FTRD       1   21.699 27.699
+ `EFG%`     1   22.122 28.122
+ `2P%`      1   22.254 28.254
+ ADJDE      1   23.233 29.233
+ FTR        1   23.352 29.352
+ ADJOE      1   23.423 29.423
+ `2P%D`     1   23.535 29.535
+ `ADJ T.`   1   23.549 29.549
+ `EFGD%`    1   23.551 29.551
- `3P%`      1   27.726 29.726

Step:  AIC=24.47
champ_game ~ `3P%` + DRB

           Df Deviance    AIC
<none>          18.472 24.472
+ ORB        1   16.473 24.473
+ `2P%D`     1   17.260 25.260
+ ADJOE      1   17.566 25.566
+ `EFGD%`    1   17.586 25.586
+ `EFG%`     1   18.050 26.050
+ `2P%`      1   18.104 26.104
+ TORD       1   18.123 26.123
+ `ADJ T.`   1   18.262 26.262
+ FTRD       1   18.299 26.299
+ TOR        1   18.349 26.349
+ FTR        1   18.386 26.386
+ ADJDE      1   18.466 26.466
- DRB        1   23.552 27.552
- `3P%`      1   23.790 27.790


Call:  glm(formula = champ_game ~ `3P%` + DRB, family = "binomial",
    data = champ_game)

Coefficients:
(Intercept)        `3P%`          DRB
   -33.7666       0.5821       0.4441
```

```
Degrees of Freedom: 19 Total (i.e. Null);  17 Residual
Null Deviance:      27.73
Residual Deviance: 18.47    AIC: 24.47
```