

# 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/20082022torvik.csv")
sportsreference <- read_csv("data/sportsreference.csv")
background <- read_csv("data/teams_background.csv")

cbb <- left_join(cbb, background)

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

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

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
  ))
```

```

cbb <- left_join(cbb, sportsreference, by = c("TEAM" = "School", "YEAR" = "Year"))

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

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),]

round_64 <- na.omit(round_64)

round_64_max <- glm(round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE +
  `EFG%` + `EFGD%` + TOR + TORD + ORB + DRB + FTR +

```

```

FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `3PR` +
`3PRD` + `ADJ T.` + `Overall SRS` + `Overall SOS` +
`Conf. W-L%` + `Home W-L%` + `Away W-L%` +
`AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` +
`PF/G` + WINS*G.x + LOSSES*G.x + ADJOE*ADJDE +
`EFG%`*`EFGD%` + TOR*TORD + ORB*DRB + FTR*FTRD +
`2P%`*`2P%D` + `3P%`*`3P%D` + `3PR`*`3PRD` +
`2P%`*`3P%` + `2P%D`*`3P%D` + `AVG PPG`*`AVG DPPG` +
WINS*`Overall SRS` + WINS*`Overall SOS` +
LOSSES*`Overall SRS` + LOSSES*`Overall SOS`,
data = round_64,
family = "binomial")

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

round_64_model <- stepAIC(round_64_max,
  scope = list(lower = round_64_min, upper = round_64_max),
  data = round_64, direction = "both")

```

Start: AIC=12868.77

```

round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +
`3P%D` + `3PR` + `3PRD` + `ADJ T.` + `Overall SRS` + `Overall SOS` +
`Conf. W-L%` + `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` +
`AVG PD` + `AST/TOV` + `PF/G` + WINS * G.x + LOSSES * G.x +
ADJOE * ADJDE + `EFG%` * `EFGD%` + TOR * TORD + ORB * DRB +
FTR * FTRD + `2P%` * `2P%D` + `3P%` * `3P%D` + `3PR` * `3PRD` +
`2P%` * `3P%` + `2P%D` * `3P%D` + `AVG PPG` * `AVG DPPG` +
WINS * `Overall SRS` + WINS * `Overall SOS` + LOSSES * `Overall SRS` +
LOSSES * `Overall SOS`

```

	Df	Deviance	AIC
- `2P%`:`3P%`	1	12775	12867
- G.x:LOSSES	1	12775	12867
- `ADJ T.`	1	12775	12867
- `3PR`:`3PRD`	1	12775	12867
- `AST/TOV`	1	12775	12867
- TOR:TORD	1	12776	12868
- WINS:`Overall SRS`	1	12776	12868
- G.x:WINS	1	12776	12868

- ORB:DRB	1	12776	12868
<none>		12775	12869
- FTR:FTRD	1	12777	12869
- LOSSES:`Overall SOS`	1	12777	12869
- LOSSES:`Overall SRS`	1	12777	12869
- ADJOE:ADJDE	1	12778	12870
- `Away W-L`	1	12778	12870
- `2P%`:`2P%D`	1	12779	12871
- `3P%`:`3P%D`	1	12780	12872
- `AVG PD`	1	12780	12872
- WINS:`Overall SOS`	1	12781	12873
- `2P%D`:`3P%D`	1	12782	12874
- `EFG%`:`EFGD%`	1	12782	12874
- `PF/G`	1	12783	12875
- `Home W-L`	1	12804	12896
- `AVG PPG`:`AVG DPPG`	1	12809	12901
- `Conf. W-L`	1	12830	12922

Step: AIC=12866.77

round\_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +  
 TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +  
 `3P%D` + `3PR` + `3PRD` + `ADJ T.` + `Overall SRS` + `Overall SOS` +  
 `Conf. W-L` + `Home W-L` + `Away W-L` + `AVG PPG` + `AVG DPPG` +  
 `AVG PD` + `AST/TOV` + `PF/G` + G.x:WINS + G.x:LOSSES + ADJOE:ADJDE +  
 `EFG%`:`EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`2P%D` +  
 `3P%`:`3P%D` + `3PR`:`3PRD` + `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` +  
 WINS:`Overall SRS` + WINS:`Overall SOS` + LOSSES:`Overall SRS` +  
 LOSSES:`Overall SOS`

	Df	Deviance	AIC
- G.x:LOSSES	1	12775	12865
- `ADJ T.`	1	12775	12865
- `3PR`:`3PRD`	1	12775	12865
- `AST/TOV`	1	12775	12865
- TOR:TORD	1	12776	12866
- WINS:`Overall SRS`	1	12776	12866
- G.x:WINS	1	12776	12866
- ORB:DRB	1	12776	12866
<none>		12775	12867
- FTR:FTRD	1	12777	12867
- LOSSES:`Overall SOS`	1	12777	12867
- LOSSES:`Overall SRS`	1	12777	12867
- ADJOE:ADJDE	1	12778	12868

- `Away W-L%`	1	12778	12868
+ `2P%`: `3P%`	1	12775	12869
- `2P%`: `2P%D`	1	12779	12869
- `3P%`: `3P%D`	1	12780	12870
- `AVG PD`	1	12780	12870
- WINS:`Overall SOS`	1	12781	12871
- `2P%D`: `3P%D`	1	12782	12872
- `EFG%`: `EFGD%`	1	12782	12872
- `PF/G`	1	12783	12873
- `Home W-L%`	1	12804	12894
- `AVG PPG`: `AVG DPPG`	1	12809	12899
- `Conf. W-L%`	1	12830	12920

Step: AIC=12864.86

```
round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +
  `3P%D` + `3PR` + `3PRD` + `ADJ T.` + `Overall SRS` + `Overall SOS` +
  `Conf. W-L%` + `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` +
  `AVG PD` + `AST/TOV` + `PF/G` + G.x:WINS + ADJOE:ADJDE +
  `EFG%`: `EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`: `2P%D` +
  `3P%`: `3P%D` + `3PR`: `3PRD` + `2P%D`: `3P%D` + `AVG PPG`: `AVG DPPG` +
  WINS:`Overall SRS` + WINS:`Overall SOS` + LOSSES:`Overall SRS` +
  LOSSES:`Overall SOS`
```

	Df	Deviance	AIC
- `ADJ T.`	1	12775	12863
- `3PR`: `3PRD`	1	12775	12863
- `AST/TOV`	1	12775	12863
- TOR:TORD	1	12776	12864
- WINS:`Overall SRS`	1	12776	12864
- G.x:WINS	1	12776	12864
- ORB:DRB	1	12776	12864
<none>		12775	12865
- FTR:FTRD	1	12777	12865
- LOSSES:`Overall SOS`	1	12777	12865
- LOSSES:`Overall SRS`	1	12777	12865
- ADJOE:ADJDE	1	12778	12866
- `Away W-L%`	1	12778	12866
+ G.x:LOSSES	1	12775	12867
+ `2P%`: `3P%`	1	12775	12867
- `2P%`: `2P%D`	1	12779	12867
- `3P%`: `3P%D`	1	12780	12868
- `AVG PD`	1	12780	12868

- WINS:`Overall SOS`	1	12781	12869
- `2P%D`:`3P%D`	1	12782	12870
- `EFG%`:`EFGD%`	1	12783	12871
- `PF/G`	1	12783	12871
- `Home W-L%`	1	12804	12892
- `AVG PPG`:`AVG DPPG`	1	12809	12897
- `Conf. W-L%`	1	12830	12918

Step: AIC=12863.12

```
round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +
  `3P%D` + `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` +
  `Conf. W-L%` + `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` +
  `AVG PD` + `AST/TOV` + `PF/G` + G.x:WINS + ADJOE:ADJDE +
  `EFG%`:`EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`2P%D` +
  `3P%`:`3P%D` + `3PR`:`3PRD` + `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` +
  WINS:`Overall SRS` + WINS:`Overall SOS` + LOSSES:`Overall SRS` +
  LOSSES:`Overall SOS`
```

	Df	Deviance	AIC
- `3PR`:`3PRD`	1	12776	12862
- `AST/TOV`	1	12776	12862
- TOR:TORD	1	12776	12862
- WINS:`Overall SRS`	1	12776	12862
- G.x:WINS	1	12776	12862
- ORB:DRB	1	12777	12863
- FTR:FTRD	1	12777	12863
<none>		12775	12863
- LOSSES:`Overall SOS`	1	12778	12864
- LOSSES:`Overall SRS`	1	12778	12864
- ADJOE:ADJDE	1	12778	12864
- `Away W-L%`	1	12779	12865
+ `ADJ T.`	1	12775	12865
+ G.x:LOSSES	1	12775	12865
+ `2P%`:`3P%`	1	12775	12865
- `2P%`:`2P%D`	1	12779	12865
- `3P%`:`3P%D`	1	12780	12866
- `AVG PD`	1	12780	12866
- WINS:`Overall SOS`	1	12781	12867
- `2P%D`:`3P%D`	1	12782	12868
- `EFG%`:`EFGD%`	1	12783	12869
- `PF/G`	1	12783	12869
- `Home W-L%`	1	12805	12891

```

- `AVG PPG`:`AVG DPPG` 1 12809 12895
- `Conf. W-L%` 1 12830 12916

```

Step: AIC=12861.46

```

round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +
  `3P%D` + `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` +
  `Conf. W-L%` + `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` +
  `AVG PD` + `AST/TOV` + `PF/G` + G.x:WINS + ADJOE:ADJDE +
  `EFG%`:`EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`2P%D` +
  `3P%`:`3P%D` + `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` + WINS:`Overall SRS` +
  WINS:`Overall SOS` + LOSSES:`Overall SRS` + LOSSES:`Overall SOS`

```

	Df	Deviance	AIC
- `AST/TOV`	1	12776	12860
- TOR:TORD	1	12776	12860
- WINS:`Overall SRS`	1	12776	12860
- G.x:WINS	1	12777	12861
- ORB:DRB	1	12777	12861
<none>		12776	12862
- FTR:FTRD	1	12778	12862
- `3PRD`	1	12778	12862
- LOSSES:`Overall SOS`	1	12778	12862
- LOSSES:`Overall SRS`	1	12778	12862
- ADJOE:ADJDE	1	12778	12862
- `Away W-L%`	1	12779	12863
+ `3PR`:`3PRD`	1	12775	12863
+ `ADJ T.`	1	12775	12863
+ G.x:LOSSES	1	12775	12863
+ `2P%`:`3P%`	1	12775	12863
- `2P%`:`2P%D`	1	12780	12864
- `3P%`:`3P%D`	1	12780	12864
- `AVG PD`	1	12781	12865
- WINS:`Overall SOS`	1	12782	12866
- `2P%D`:`3P%D`	1	12782	12866
- `EFG%`:`EFGD%`	1	12783	12867
- `3PR`	1	12783	12867
- `PF/G`	1	12784	12868
- `Home W-L%`	1	12805	12889
- `AVG PPG`:`AVG DPPG`	1	12810	12894
- `Conf. W-L%`	1	12831	12915

Step: AIC=12859.8

```

round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +
  `3P%D` + `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` +
  `Conf. W-L%` + `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` +
  `AVG PD` + `PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` +
  TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` +
  `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` + WINS:`Overall SRS` +
  WINS:`Overall SOS` + LOSSES:`Overall SRS` + LOSSES:`Overall SOS`

```

	Df	Deviance	AIC
- TOR:TORD	1	12777	12859
- WINS:`Overall SRS`	1	12777	12859
- G.x:WINS	1	12777	12859
- ORB:DRB	1	12777	12859
<none>		12776	12860
- `3PRD`	1	12778	12860
- FTR:FTRD	1	12778	12860
- LOSSES:`Overall SOS`	1	12778	12860
- LOSSES:`Overall SRS`	1	12778	12860
- ADJOE:ADJDE	1	12779	12861
- `Away W-L%`	1	12779	12861
+ `AST/TOV`	1	12776	12862
+ `3PR`:`3PRD`	1	12776	12862
+ `ADJ T.`	1	12776	12862
+ G.x:LOSSES	1	12776	12862
+ `2P%`:`3P%`	1	12776	12862
- `2P%`:`2P%D`	1	12780	12862
- `3P%`:`3P%D`	1	12780	12862
- `AVG PD`	1	12781	12863
- WINS:`Overall SOS`	1	12782	12864
- `2P%D`:`3P%D`	1	12783	12865
- `EFG%`:`EFGD%`	1	12783	12865
- `3PR`	1	12783	12865
- `PF/G`	1	12786	12868
- `Home W-L%`	1	12805	12887
- `AVG PPG`:`AVG DPPG`	1	12810	12892
- `Conf. W-L%`	1	12831	12913

Step: AIC=12858.85

```

round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +
  `3P%D` + `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` +
  `Conf. W-L%` + `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` +

```



`AVG PD` + `PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` +  
 ORB:DRB + FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` + `2P%D`:`3P%D` +  
 `AVG PPG`:`AVG DPPG` + WINS:`Overall SRS` + WINS:`Overall SOS` +  
 LOSSES:`Overall SRS` + LOSSES:`Overall SOS`

	Df	Deviance	AIC
- TOR	1	12778	12858
- WINS:`Overall SRS`	1	12778	12858
- ORB:DRB	1	12778	12858
- G.x:WINS	1	12778	12858
<none>		12777	12859
- `3PRD`	1	12779	12859
- TORD	1	12779	12859
- ADJOE:ADJDE	1	12779	12859
- FTR:FTRD	1	12779	12859
- LOSSES:`Overall SOS`	1	12779	12859
- LOSSES:`Overall SRS`	1	12780	12860
+ TOR:TORD	1	12776	12860
- `Away W-L%`	1	12780	12860
+ `AST/TOV`	1	12776	12860
+ `3PR`:`3PRD`	1	12776	12860
+ `ADJ T.`	1	12777	12861
+ G.x:LOSSES	1	12777	12861
+ `2P%`:`3P%`	1	12777	12861
- `2P%`:`2P%D`	1	12781	12861
- `3P%`:`3P%D`	1	12782	12862
- `AVG PD`	1	12782	12862
- WINS:`Overall SOS`	1	12784	12864
- `2P%D`:`3P%D`	1	12784	12864
- `3PR`	1	12785	12865
- `EFG%`:`EFGD%`	1	12785	12865
- `PF/G`	1	12787	12867
- `Home W-L%`	1	12806	12886
- `AVG PPG`:`AVG DPPG`	1	12811	12891
- `Conf. W-L%`	1	12833	12913

Step: AIC=12857.79

round\_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +  
 TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +  
 `3P%D` + `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` +  
 `Conf. W-L%` + `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` +  
 `AVG PD` + `PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` +  
 ORB:DRB + FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` + `2P%D`:`3P%D` +

`AVG PPG`:`AVG DPPG` + WINS:`Overall SRS` + WINS:`Overall SOS` +  
 LOSSES:`Overall SRS` + LOSSES:`Overall SOS`

	Df	Deviance	AIC
- WINS:`Overall SRS`	1	12779	12857
- ORB:DRB	1	12779	12857
- G.x:WINS	1	12779	12857
- `3PRD`	1	12780	12858
<none>		12778	12858
- ADJOE:ADJDE	1	12780	12858
- LOSSES:`Overall SRS`	1	12780	12858
- FTR:FTRD	1	12780	12858
- LOSSES:`Overall SOS`	1	12781	12859
- TORD	1	12781	12859
+ TOR	1	12777	12859
- `Away W-L`	1	12781	12859
+ `AST/TOV`	1	12777	12859
+ `3PR`:`3PRD`	1	12778	12860
+ `ADJ T.`	1	12778	12860
+ G.x:LOSSES	1	12778	12860
+ `2P%`:`3P%`	1	12778	12860
- `2P%`:`2P%D`	1	12782	12860
- `3P%`:`3P%D`	1	12782	12860
- `AVG PD`	1	12783	12861
- `2P%D`:`3P%D`	1	12784	12862
- WINS:`Overall SOS`	1	12785	12863
- `EFG%`:`EFGD%`	1	12786	12864
- `3PR`	1	12787	12865
- `PF/G`	1	12789	12867
- `Home W-L`	1	12807	12885
- `AVG PPG`:`AVG DPPG`	1	12812	12890
- `Conf. W-L`	1	12834	12912

Step: AIC=12856.88

round\_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +  
 TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +  
 `3P%D` + `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` +  
 `Conf. W-L` + `Home W-L` + `Away W-L` + `AVG PPG` + `AVG DPPG` +  
 `AVG PD` + `PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` +  
 ORB:DRB + FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` + `2P%D`:`3P%D` +  
 `AVG PPG`:`AVG DPPG` + WINS:`Overall SOS` + LOSSES:`Overall SRS` +  
 LOSSES:`Overall SOS`

	Df	Deviance	AIC
- ORB:DRB	1	12780	12856
- LOSSES:`Overall SOS`	1	12781	12857
- `3PRD`	1	12781	12857
<none>		12779	12857
- G.x:WINS	1	12781	12857
- ADJOE:ADJDE	1	12781	12857
- LOSSES:`Overall SRS`	1	12781	12857
- FTR:FTRD	1	12782	12858
+ WINS:`Overall SRS`	1	12778	12858
- TORD	1	12782	12858
+ TOR	1	12778	12858
- `Away W-L`	1	12782	12858
+ `AST/TOV`	1	12778	12858
+ `3PR`:`3PRD`	1	12779	12859
+ `ADJ T.`	1	12779	12859
+ G.x:LOSSES	1	12779	12859
+ `2P%`:`3P%`	1	12779	12859
- `2P%`:`2P%D`	1	12783	12859
- `3P%`:`3P%D`	1	12783	12859
- `AVG PD`	1	12784	12860
- `2P%D`:`3P%D`	1	12785	12861
- WINS:`Overall SOS`	1	12786	12862
- `EFG%`:`EFGD%`	1	12787	12863
- `3PR`	1	12788	12864
- `PF/G`	1	12790	12866
- `Home W-L`	1	12808	12884
- `AVG PPG`:`AVG DPPG`	1	12813	12889
- `Conf. W-L`	1	12835	12911

Step: AIC=12856.21

```
round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TORD + ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` +
  `3P%D` + `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` +
  `Conf. W-L` + `Home W-L` + `Away W-L` + `AVG PPG` + `AVG DPPG` +
  `AVG PD` + `PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` +
  FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` + `2P%D`:`3P%D` +
  `AVG PPG`:`AVG DPPG` + WINS:`Overall SOS` + LOSSES:`Overall SRS` +
  LOSSES:`Overall SOS`
```

	Df	Deviance	AIC
- DRB	1	12780	12854
- LOSSES:`Overall SOS`	1	12782	12856

- `3PRD`	1	12782	12856
<none>		12780	12856
- G.x:WINS	1	12782	12856
- ADJOE:ADJDE	1	12783	12857
- FTR:FTRD	1	12783	12857
- LOSSES:`Overall SRS`	1	12783	12857
+ ORB:DRB	1	12779	12857
- TORD	1	12783	12857
+ WINS:`Overall SRS`	1	12779	12857
+ TOR	1	12779	12857
- `Away W-L`	1	12784	12858
- ORB	1	12784	12858
+ `AST/TOV`	1	12780	12858
+ `ADJ T.`	1	12780	12858
+ `3PR`:`3PRD`	1	12780	12858
+ G.x:LOSSES	1	12780	12858
+ `2P%`:`3P%`	1	12780	12858
- `2P%`:`2P%D`	1	12784	12858
- `3P%`:`3P%D`	1	12785	12859
- `AVG PD`	1	12786	12860
- `2P%D`:`3P%D`	1	12787	12861
- WINS:`Overall SOS`	1	12788	12862
- `EFG%`:`EFGD%`	1	12788	12862
- `3PR`	1	12790	12864
- `PF/G`	1	12791	12865
- `Home W-L`	1	12809	12883
- `AVG PPG`:`AVG DPPG`	1	12815	12889
- `Conf. W-L`	1	12836	12910

Step: AIC=12854.25

round\_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +  
 TORD + ORB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +  
 `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` + `Conf. W-L` +  
 `Home W-L` + `Away W-L` + `AVG PPG` + `AVG DPPG` + `AVG PD` +  
 `PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` + FTR:FTRD +  
 `2P%`:`2P%D` + `3P%`:`3P%D` + `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` +  
 WINS:`Overall SOS` + LOSSES:`Overall SRS` + LOSSES:`Overall SOS`

	Df	Deviance	AIC
- LOSSES:`Overall SOS`	1	12782	12854
- `3PRD`	1	12782	12854
<none>		12780	12854
- G.x:WINS	1	12782	12854

- ADJOE:ADJDE	1	12783	12855
- FTR:FTRD	1	12783	12855
- LOSSES:`Overall SRS`	1	12783	12855
+ WINS:`Overall SRS`	1	12779	12855
+ TOR	1	12779	12855
- `Away W-L%`	1	12784	12856
- ORB	1	12784	12856
+ `AST/TOV`	1	12780	12856
+ `ADJ T.`	1	12780	12856
+ `3PR`:`3PRD`	1	12780	12856
+ G.x:LOSSES	1	12780	12856
+ DRB	1	12780	12856
- `2P%`:`2P%D`	1	12784	12856
+ `2P%`:`3P%`	1	12780	12856
- `3P%`:`3P%D`	1	12785	12857
- `AVG PD`	1	12786	12858
- `2P%D`:`3P%D`	1	12787	12859
- TORD	1	12787	12859
- WINS:`Overall SOS`	1	12788	12860
- `EFG%`:`EFGD%`	1	12788	12860
- `3PR`	1	12790	12862
- `PF/G`	1	12791	12863
- `Home W-L%`	1	12809	12881
- `AVG PPG`:`AVG DPPG`	1	12815	12887
- `Conf. W-L%`	1	12836	12908

Step: AIC=12854.04

```
round_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TORD + ORB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +
  `3PR` + `3PRD` + `Overall SRS` + `Overall SOS` + `Conf. W-L%` +
  `Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` +
  `PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` + FTR:FTRD +
  `2P%`:`2P%D` + `3P%`:`3P%D` + `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` +
  WINS:`Overall SOS` + LOSSES:`Overall SRS`
```

	Df	Deviance	AIC
- LOSSES:`Overall SRS`	1	12783	12853
- G.x:WINS	1	12784	12854
- `3PRD`	1	12784	12854
<none>		12782	12854
- ADJOE:ADJDE	1	12784	12854
+ LOSSES:`Overall SOS`	1	12780	12854
- FTR:FTRD	1	12784	12854

+ TOR	1	12781	12855
- `Away W-L%`	1	12785	12855
- ORB	1	12786	12856
+ `AST/TOV`	1	12782	12856
+ `ADJ T.`	1	12782	12856
+ `3PR`:`3PRD`	1	12782	12856
+ G.x:LOSSES	1	12782	12856
+ WINS:`Overall SRS`	1	12782	12856
+ DRB	1	12782	12856
+ `2P%`:`3P%`	1	12782	12856
- `2P%`:`2P%D`	1	12786	12856
- `3P%`:`3P%D`	1	12787	12857
- `AVG PD`	1	12787	12857
- WINS:`Overall SOS`	1	12789	12859
- `2P%D`:`3P%D`	1	12789	12859
- TORD	1	12790	12860
- `EFG%`:`EFGD%`	1	12791	12861
- `3PR`	1	12791	12861
- `PF/G`	1	12793	12863
- `Home W-L%`	1	12810	12880
- `AVG PPG`:`AVG DPPG`	1	12817	12887
- `Conf. W-L%`	1	12839	12909

Step: AIC=12853.29

round\_64 ~ G.x + WINS + LOSSES + ADJOE + ADJDE + `EFG%` + `EFGD%` +  
TORD + ORB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +  
`3PR` + `3PRD` + `Overall SRS` + `Overall SOS` + `Conf. W-L%` +  
`Home W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` +  
`PF/G` + G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` + FTR:FTRD +  
`2P%`:`2P%D` + `3P%`:`3P%D` + `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` +  
WINS:`Overall SOS`

Step: AIC=12853.29

round\_64 ~ G.x + WINS + ADJOE + ADJDE + `EFG%` + `EFGD%` + TORD +  
ORB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `3PR` +  
`3PRD` + `Overall SRS` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` +  
`Away W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` + `PF/G` +  
G.x:WINS + ADJOE:ADJDE + `EFG%`:`EFGD%` + FTR:FTRD + `2P%`:`2P%D` +  
`3P%`:`3P%D` + `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` + WINS:`Overall SOS`

	Df	Deviance	AIC
- `Overall SRS`	1	12783	12851

- `3PRD`	1	12785	12853
- G.x:WINS	1	12785	12853
<none>		12783	12853
- FTR:FTRD	1	12786	12854
+ TOR	1	12782	12854
- ADJOE:ADJDE	1	12786	12854
- `Away W-L%`	1	12786	12854
+ WINS:`Overall SRS`	1	12782	12854
- ORB	1	12787	12855
+ `AST/TOV`	1	12783	12855
+ `ADJ T.`	1	12783	12855
+ `3PR`:`3PRD`	1	12783	12855
+ `2P%`:`3P%`	1	12783	12855
+ DRB	1	12783	12855
- `2P%`:`2P%D`	1	12787	12855
- `3P%`:`3P%D`	1	12788	12856
- `AVG PD`	1	12789	12857
- `2P%D`:`3P%D`	1	12790	12858
- TORD	1	12791	12859
- `EFG%`:`EFGD%`	1	12792	12860
- `3PR`	1	12793	12861
- `PF/G`	1	12794	12862
- WINS:`Overall SOS`	1	12797	12865
- `Home W-L%`	1	12811	12879
- `AVG PPG`:`AVG DPPG`	1	12818	12886
- `Conf. W-L%`	1	12841	12909

Step: AIC=12851.31

round\_64 ~ G.x + WINS + ADJOE + ADJDE + `EFG%` + `EFGD%` + TORD +  
 ORB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `3PR` +  
 `3PRD` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
 `AVG PPG` + `AVG DPPG` + `AVG PD` + `PF/G` + G.x:WINS + ADJOE:ADJDE +  
 `EFG%`:`EFGD%` + FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` +  
 `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` + WINS:`Overall SOS`

	Df	Deviance	AIC
- `3PRD`	1	12785	12851
- G.x:WINS	1	12785	12851
<none>		12783	12851
- FTR:FTRD	1	12786	12852
+ TOR	1	12782	12852
- `Away W-L%`	1	12786	12852
- ADJOE:ADJDE	1	12786	12852

- ORB	1	12787	12853
+ `AST/TOV`	1	12783	12853
+ `ADJ T.`	1	12783	12853
+ `3PR`:`3PRD`	1	12783	12853
+ `Overall SRS`	1	12783	12853
+ `2P%`:`3P%`	1	12783	12853
+ DRB	1	12783	12853
- `2P%`:`2P%D`	1	12787	12853
- `3P%`:`3P%D`	1	12788	12854
- `AVG PD`	1	12789	12855
- `2P%D`:`3P%D`	1	12790	12856
- TORD	1	12791	12857
- `EFG%`:`EFGD%`	1	12792	12858
- `3PR`	1	12793	12859
- `PF/G`	1	12794	12860
- WINS:`Overall SOS`	1	12797	12863
- `Home W-L%`	1	12812	12878
- `AVG PPG`:`AVG DPPG`	1	12819	12885
- `Conf. W-L%`	1	12841	12907

Step: AIC=12850.97

round\_64 ~ G.x + WINS + ADJOE + ADJDE + `EFG%` + `EFGD%` + TORD +  
 ORB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `3PR` +  
 `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
 `AVG PPG` + `AVG DPPG` + `AVG PD` + `PF/G` + G.x:WINS + ADJOE:ADJDE +  
 `EFG%`:`EFGD%` + FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` +  
 `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` + WINS:`Overall SOS`

	Df	Deviance	AIC
- G.x:WINS	1	12787	12851
<none>		12785	12851
+ `3PRD`	1	12783	12851
- FTR:FTRD	1	12787	12851
+ TOR	1	12784	12852
- ADJOE:ADJDE	1	12788	12852
- `Away W-L%`	1	12788	12852
- ORB	1	12788	12852
+ `AST/TOV`	1	12784	12852
+ `ADJ T.`	1	12785	12853
+ `Overall SRS`	1	12785	12853
+ DRB	1	12785	12853
+ `2P%`:`3P%`	1	12785	12853
- `2P%`:`2P%D`	1	12789	12853



- `AVG PD`	1	12790	12854
- `3P%`:`3P%D`	1	12790	12854
- `2P%D`:`3P%D`	1	12792	12856
- TORD	1	12792	12856
- `3PR`	1	12794	12858
- `EFG%`:`EFGD%`	1	12794	12858
- `PF/G`	1	12796	12860
- WINS:`Overall SOS`	1	12799	12863
- `Home W-L%`	1	12814	12878
- `AVG PPG`:`AVG DPPG`	1	12821	12885
- `Conf. W-L%`	1	12842	12906

Step: AIC=12850.95

round\_64 ~ G.x + WINS + ADJOE + ADJDE + `EFG%` + `EFGD%` + TORD +  
 ORB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `3PR` +  
 `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
 `AVG PPG` + `AVG DPPG` + `AVG PD` + `PF/G` + ADJOE:ADJDE +  
 `EFG%`:`EFGD%` + FTR:FTRD + `2P%`:`2P%D` + `3P%`:`3P%D` +  
 `2P%D`:`3P%D` + `AVG PPG`:`AVG DPPG` + WINS:`Overall SOS`

	Df	Deviance	AIC
<none>		12787	12851
+ G.x:WINS	1	12785	12851
+ `3PRD`	1	12785	12851
- FTR:FTRD	1	12790	12852
+ TOR	1	12786	12852
- ADJOE:ADJDE	1	12790	12852
- `Away W-L%`	1	12790	12852
- ORB	1	12790	12852
+ `AST/TOV`	1	12787	12853
+ `ADJ T.`	1	12787	12853
+ `Overall SRS`	1	12787	12853
- G.x	1	12791	12853
+ DRB	1	12787	12853
+ `2P%`:`3P%`	1	12787	12853
- `2P%`:`2P%D`	1	12792	12854
- `AVG PD`	1	12792	12854
- `3P%`:`3P%D`	1	12792	12854
- TORD	1	12794	12856
- `2P%D`:`3P%D`	1	12794	12856
- `EFG%`:`EFGD%`	1	12796	12858
- `3PR`	1	12796	12858
- `PF/G`	1	12798	12860

```

- WINS:`Overall SOS`      1      12799 12861
- `Home W-L%`             1      12816 12878
- `AVG PPG`:`AVG DPPG`    1      12822 12884
- `Conf. W-L%`           1      12843 12905

```

```

round_32_max <- glm(round_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` +
  `2P%D` + `3P%` + `3P%D` + `ADJ T.` +
  `Overall SRS` + `Overall SOS` + `Conf. W-L%` +
  `Home W-L%` + `Away W-L%` + `AVG PPG` +
  `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` +
  ADJOE*ADJDE + `EFG%`*`EFGD%` + TOR*TORD +
  ORB*DRB + FTR*FTRD + `2P%`*`2P%D` +
  `2P%`*`3P%` + `3P%`*`3P%D` + `AVG PPG`*`AVG DPPG`,
  data = round_32,
  family = "binomial")

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

round_32_model <- stepAIC(round_32_max,
  scope = list(lower = round_32_min,
    upper = round_32_max),
  data = round_32, direction = "both")

```

Start: AIC=7718.95

```

round_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +
  DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` +
  `Overall SRS` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` +
  `Away W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` +
  `PF/G` + ADJOE * ADJDE + `EFG%` * `EFGD%` + TOR * TORD +
  ORB * DRB + FTR * FTRD + `2P%` * `2P%D` + `2P%` * `3P%` +
  `3P%` * `3P%D` + `AVG PPG` * `AVG DPPG`

```

	Df	Deviance	AIC
- `ADJ T.`	1	7649.0	7717.0
- `Away W-L%`	1	7649.2	7717.2
- `2P%`:`2P%D`	1	7649.3	7717.3
- ORB:DRB	1	7649.5	7717.5
- `Overall SRS`	1	7649.5	7717.5

- FTR:FTRD	1	7650.5	7718.5
<none>		7649.0	7719.0
- `AVG PD`	1	7651.3	7719.3
- `3P%`: `3P%D`	1	7651.4	7719.4
- `2P%`: `3P%`	1	7651.9	7719.9
- `EFG%`: `EFGD%`	1	7652.7	7720.7
- TOR:TORD	1	7652.8	7720.8
- ADJOE:ADJDE	1	7656.3	7724.3
- `AVG PPG`: `AVG DPPG`	1	7657.5	7725.5
- `Conf. W-L%`	1	7660.2	7728.2
- `Home W-L%`	1	7661.4	7729.4
- `Overall SOS`	1	7665.6	7733.6
- `AST/TOV`	1	7691.9	7759.9
- `PF/G`	1	7693.3	7761.3

Step: AIC=7716.98

round\_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +  
 DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `Overall SRS` +  
 `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
 `AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` +  
 ADJOE:ADJDE + `EFG%`: `EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD +  
 `2P%`: `2P%D` + `2P%`: `3P%` + `3P%`: `3P%D` + `AVG PPG`: `AVG DPPG`

	Df	Deviance	AIC
- `Away W-L%`	1	7649.2	7715.2
- `2P%`: `2P%D`	1	7649.3	7715.3
- ORB:DRB	1	7649.5	7715.5
- `Overall SRS`	1	7649.5	7715.5
- FTR:FTRD	1	7650.5	7716.5
<none>		7649.0	7717.0
- `AVG PD`	1	7651.3	7717.3
- `3P%`: `3P%D`	1	7651.4	7717.4
- `2P%`: `3P%`	1	7652.0	7718.0
- `EFG%`: `EFGD%`	1	7652.8	7718.8
- TOR:TORD	1	7652.8	7718.8
+ `ADJ T.`	1	7649.0	7719.0
- ADJOE:ADJDE	1	7656.4	7722.4
- `AVG PPG`: `AVG DPPG`	1	7657.5	7723.5
- `Conf. W-L%`	1	7660.2	7726.2
- `Home W-L%`	1	7661.4	7727.4
- `Overall SOS`	1	7665.6	7731.6
- `AST/TOV`	1	7693.2	7759.2
- `PF/G`	1	7693.3	7759.3

Step: AIC=7715.24

```
round_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +
  DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `Overall SRS` +
  `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `AVG PPG` +
  `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +
  `EFG%`:`EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`2P%D` +
  `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- `2P%`:`2P%D`	1	7649.6	7713.6
- ORB:DRB	1	7649.8	7713.8
- `Overall SRS`	1	7649.9	7713.9
- FTR:FTRD	1	7650.8	7714.8
<none>		7649.2	7715.2
- `AVG PD`	1	7651.5	7715.5
- `3P%`:`3P%D`	1	7651.6	7715.6
- `2P%`:`3P%`	1	7652.2	7716.2
+ `Away W-L%`	1	7649.0	7717.0
- `EFG%`:`EFGD%`	1	7653.0	7717.0
- TOR:TORD	1	7653.0	7717.0
+ `ADJ T.`	1	7649.2	7717.2
- ADJOE:ADJDE	1	7656.5	7720.5
- `AVG PPG`:`AVG DPPG`	1	7657.7	7721.7
- `Overall SOS`	1	7665.7	7729.7
- `Home W-L%`	1	7674.9	7738.9
- `Conf. W-L%`	1	7687.1	7751.1
- `AST/TOV`	1	7693.4	7757.4
- `PF/G`	1	7693.7	7757.7

Step: AIC=7713.59

```
round_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +
  DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `Overall SRS` +
  `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `AVG PPG` +
  `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +
  `EFG%`:`EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`3P%` +
  `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- ORB:DRB	1	7650.1	7712.1
- `Overall SRS`	1	7650.2	7712.2
- `2P%D`	1	7650.6	7712.6
- FTR:FTRD	1	7651.1	7713.1

<none>		7649.6	7713.6
- `3P%`:`3P%D`	1	7651.8	7713.8
- `AVG PD`	1	7651.9	7713.9
- `2P%`:`3P%`	1	7652.6	7714.6
+ `2P%`:`2P%D`	1	7649.2	7715.2
+ `Away W-L%`	1	7649.3	7715.3
- TOR:TORD	1	7653.4	7715.4
+ `ADJ T.`	1	7649.6	7715.6
- ADJOE:ADJDE	1	7656.7	7718.7
- `EFG%`:`EFGD%`	1	7657.3	7719.3
- `AVG PPG`:`AVG DPPG`	1	7658.1	7720.1
- `Overall SOS`	1	7666.1	7728.1
- `Home W-L%`	1	7675.2	7737.2
- `Conf. W-L%`	1	7687.4	7749.4
- `AST/TOV`	1	7693.9	7755.9
- `PF/G`	1	7694.1	7756.1

Step: AIC=7712.12

```
round_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +
  DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `Overall SRS` +
  `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `AVG PPG` +
  `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +
  `EFG%`:`EFGD%` + TOR:TORD + FTR:FTRD + `2P%`:`3P%` + `3P%`:`3P%D` +
  `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- DRB	1	7650.3	7710.3
- `Overall SRS`	1	7650.7	7710.7
- ORB	1	7651.1	7711.1
- `2P%D`	1	7651.1	7711.1
- FTR:FTRD	1	7651.5	7711.5
<none>		7650.1	7712.1
- `3P%`:`3P%D`	1	7652.4	7712.4
- `AVG PD`	1	7652.6	7712.6
- `2P%`:`3P%`	1	7653.1	7713.1
+ ORB:DRB	1	7649.6	7713.6
+ `2P%`:`2P%D`	1	7649.8	7713.8
+ `Away W-L%`	1	7649.8	7713.8
+ `ADJ T.`	1	7650.1	7714.1
- TOR:TORD	1	7654.2	7714.2
- ADJOE:ADJDE	1	7657.2	7717.2
- `EFG%`:`EFGD%`	1	7658.1	7718.1
- `AVG PPG`:`AVG DPPG`	1	7658.5	7718.5

- `Overall SOS`	1	7666.8	7726.8
- `Home W-L%`	1	7675.9	7735.9
- `Conf. W-L%`	1	7687.9	7747.9
- `PF/G`	1	7694.7	7754.7
- `AST/TOV`	1	7694.7	7754.7

Step: AIC=7710.27

round\_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +  
 FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `Overall SRS` +  
 `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `AVG PPG` +  
 `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +  
 `EFG%`:`EFGD%` + TOR:TORD + FTR:FTRD + `2P%`:`3P%` + `3P%`:`3P%D` +  
 `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- `Overall SRS`	1	7650.8	7708.8
- `2P%D`	1	7651.2	7709.2
- ORB	1	7651.5	7709.5
- FTR:FTRD	1	7651.7	7709.7
<none>		7650.3	7710.3
- `3P%`:`3P%D`	1	7652.5	7710.5
- `AVG PD`	1	7652.7	7710.7
- `2P%`:`3P%`	1	7653.3	7711.3
+ `2P%`:`2P%D`	1	7650.0	7712.0
+ `Away W-L%`	1	7650.0	7712.0
+ DRB	1	7650.1	7712.1
+ `ADJ T.`	1	7650.2	7712.2
- TOR:TORD	1	7654.5	7712.5
- ADJOE:ADJDE	1	7657.5	7715.5
- `EFG%`:`EFGD%`	1	7658.2	7716.2
- `AVG PPG`:`AVG DPPG`	1	7658.6	7716.6
- `Overall SOS`	1	7666.9	7724.9
- `Home W-L%`	1	7676.1	7734.1
- `Conf. W-L%`	1	7688.5	7746.5
- `PF/G`	1	7694.7	7752.7
- `AST/TOV`	1	7694.8	7752.8

Step: AIC=7708.81

round\_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +  
 FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `Overall SOS` +  
 `Conf. W-L%` + `Home W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` +  
 `AST/TOV` + `PF/G` + ADJOE:ADJDE + `EFG%`:`EFGD%` + TOR:TORD +  
 FTR:FTRD + `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- `2P%D`	1	7651.7	7707.7
- ORB	1	7651.9	7707.9
- FTR:FTRD	1	7652.3	7708.3
<none>		7650.8	7708.8
- `3P%`:`3P%D`	1	7653.1	7709.1
- `AVG PD`	1	7653.4	7709.4
- `2P%`:`3P%`	1	7653.8	7709.8
+ `Overall SRS`	1	7650.3	7710.3
+ `Away W-L%`	1	7650.5	7710.5
+ `2P%`:`2P%D`	1	7650.5	7710.5
+ DRB	1	7650.7	7710.7
+ `ADJ T.`	1	7650.8	7710.8
- TOR:TORD	1	7654.9	7710.9
- ADJOE:ADJDE	1	7657.7	7713.7
- `EFG%`:`EFGD%`	1	7658.6	7714.6
- `AVG PPG`:`AVG DPPG`	1	7658.8	7714.8
- `Home W-L%`	1	7677.0	7733.0
- `Conf. W-L%`	1	7690.6	7746.6
- `AST/TOV`	1	7694.8	7750.8
- `PF/G`	1	7695.0	7751.0
- `Overall SOS`	1	8069.9	8125.9

Step: AIC=7707.71

```
round_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + ORB +
  FTR + FTRD + `2P%` + `3P%` + `3P%D` + `Overall SOS` + `Conf. W-L%` +
  `Home W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` +
  `PF/G` + ADJOE:ADJDE + `EFG%`:`EFGD%` + TOR:TORD + FTR:FTRD +
  `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- ORB	1	7652.8	7706.8
- FTR:FTRD	1	7653.3	7707.3
<none>		7651.7	7707.7
- `3P%`:`3P%D`	1	7653.8	7707.8
- `AVG PD`	1	7654.4	7708.4
- `2P%`:`3P%`	1	7654.8	7708.8
+ `2P%D`	1	7650.8	7708.8
+ `Overall SRS`	1	7651.2	7709.2
+ `Away W-L%`	1	7651.4	7709.4
+ DRB	1	7651.6	7709.6
+ `ADJ T.`	1	7651.7	7709.7

- TOR:TORD	1	7656.0	7710.0
- ADJOE:ADJDE	1	7658.8	7712.8
- `EFG%`:`EFGD%`	1	7659.6	7713.6
- `AVG PPG`:`AVG DPPG`	1	7659.7	7713.7
- `Home W-L%`	1	7678.3	7732.3
- `Conf. W-L%`	1	7692.1	7746.1
- `AST/TOV`	1	7695.3	7749.3
- `PF/G`	1	7695.7	7749.7
- `Overall SOS`	1	8071.7	8125.7

Step: AIC=7706.75

round\_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + FTR +  
 FTRD + `2P%` + `3P%` + `3P%D` + `Overall SOS` + `Conf. W-L%` +  
 `Home W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` +  
 `PF/G` + ADJOE:ADJDE + `EFG%`:`EFGD%` + TOR:TORD + FTR:FTRD +  
 `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- FTR:FTRD	1	7654.5	7706.5
<none>		7652.8	7706.8
- `3P%`:`3P%D`	1	7654.9	7706.9
- `AVG PD`	1	7655.4	7707.4
+ ORB	1	7651.7	7707.7
- `2P%`:`3P%`	1	7655.8	7707.8
+ `2P%D`	1	7651.9	7707.9
+ `Overall SRS`	1	7652.4	7708.4
+ `Away W-L%`	1	7652.4	7708.4
+ DRB	1	7652.5	7708.5
+ `ADJ T.`	1	7652.7	7708.7
- TOR:TORD	1	7656.9	7708.9
- ADJOE:ADJDE	1	7659.7	7711.7
- `EFG%`:`EFGD%`	1	7660.4	7712.4
- `AVG PPG`:`AVG DPPG`	1	7660.7	7712.7
- `Home W-L%`	1	7679.9	7731.9
- `Conf. W-L%`	1	7693.4	7745.4
- `AST/TOV`	1	7696.1	7748.1
- `PF/G`	1	7696.5	7748.5
- `Overall SOS`	1	8090.1	8142.1

Step: AIC=7706.47

round\_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + FTR +  
 FTRD + `2P%` + `3P%` + `3P%D` + `Overall SOS` + `Conf. W-L%` +  
 `Home W-L%` + `AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` +



`PF/G` + ADJOE:ADJDE + `EFG%`:`EFGD%` + TOR:TORD + `2P%`:`3P%` +  
`3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- FTRD	1	7654.8	7704.8
- FTR	1	7656.1	7706.1
<none>		7654.5	7706.5
- `3P%`:`3P%D`	1	7656.5	7706.5
+ FTR:FTRD	1	7652.8	7706.8
- `AVG PD`	1	7657.1	7707.1
+ ORB	1	7653.3	7707.3
+ `2P%D`	1	7653.5	7707.5
- `2P%`:`3P%`	1	7657.6	7707.6
- TOR:TORD	1	7658.0	7708.0
+ `Overall SRS`	1	7654.1	7708.1
+ DRB	1	7654.2	7708.2
+ `Away W-L%`	1	7654.2	7708.2
+ `ADJ T.`	1	7654.5	7708.5
- ADJOE:ADJDE	1	7661.3	7711.3
- `EFG%`:`EFGD%`	1	7661.8	7711.8
- `AVG PPG`:`AVG DPPG`	1	7662.5	7712.5
- `Home W-L%`	1	7682.0	7732.0
- `Conf. W-L%`	1	7695.1	7745.1
- `PF/G`	1	7697.8	7747.8
- `AST/TOV`	1	7698.2	7748.2
- `Overall SOS`	1	8090.2	8140.2

Step: AIC=7704.77

round\_32 ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD + FTR +  
`2P%` + `3P%` + `3P%D` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` +  
`AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` +  
ADJOE:ADJDE + `EFG%`:`EFGD%` + TOR:TORD + `2P%`:`3P%` + `3P%`:`3P%D` +  
`AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
<none>		7654.8	7704.8
- `3P%`:`3P%D`	1	7656.8	7704.8
- FTR	1	7656.9	7704.9
- `AVG PD`	1	7657.5	7705.5
+ ORB	1	7653.6	7705.6
+ `2P%D`	1	7653.9	7705.9
- `2P%`:`3P%`	1	7657.9	7705.9
- TOR:TORD	1	7658.3	7706.3

+ `Overall SRS`	1	7654.4	7706.4
+ `Away W-L`	1	7654.5	7706.5
+ FTRD	1	7654.5	7706.5
+ DRB	1	7654.6	7706.6
+ `ADJ T.`	1	7654.8	7706.8
- ADJOE:ADJDE	1	7661.8	7709.8
- `EFG%`:`EFGD`	1	7662.2	7710.2
- `AVG PPG`:`AVG DPPG`	1	7662.7	7710.7
- `Home W-L`	1	7682.2	7730.2
- `Conf. W-L`	1	7695.1	7743.1
- `AST/TOV`	1	7698.6	7746.6
- `PF/G`	1	7703.4	7751.4
- `Overall SOS`	1	8090.3	8138.3

```
sweet_sixteen_max <- glm(sweet_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` +
  TOR + TORD + ORB + DRB + FTR + FTRD + `2P%` +
  `2P%D` + `3P%` + `3P%D` + `ADJ T.` +
  `Overall SRS` + `Overall SOS` + `Conf. W-L` +
  `Home W-L` + `Away W-L` + `AVG PPG` +
  `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` +
  ADJOE*ADJDE + `EFG%`*`EFGD%` + TOR*TORD +
  ORB*DRB + FTR*FTRD + `2P%`*`2P%D` +
  `2P%`*`3P%` + `3P%`*`3P%D` + `AVG PPG`*`AVG DPPG`,
  data = sweet_sixteen,
  family = "binomial")
```

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

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

Start: AIC=4052.73

```
sweet_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +
  ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +
  `ADJ T.` + `Overall SRS` + `Overall SOS` + `Conf. W-L` +
  `Home W-L` + `Away W-L` + `AVG PPG` + `AVG DPPG` + `AVG PD` +
  `AST/TOV` + `PF/G` + ADJOE * ADJDE + `EFG%` * `EFGD%` + TOR *
```

TORD + ORB \* DRB + FTR \* FTRD + `2P%` \* `2P%D` + `2P%` \*  
`3P%` + `3P%` \* `3P%D` + `AVG PPG` \* `AVG DPPG`

	Df	Deviance	AIC
- `Overall SRS`	1	3982.7	4050.7
- `EFG%`:`EFGD%`	1	3982.7	4050.7
- `AVG PD`	1	3982.7	4050.7
- FTR:FTRD	1	3982.9	4050.9
- ORB:DRB	1	3982.9	4050.9
- `PF/G`	1	3983.0	4051.0
- `Home W-L%`	1	3983.0	4051.0
- `2P%`:`3P%`	1	3983.2	4051.2
- `3P%`:`3P%D`	1	3984.0	4052.0
- `AST/TOV`	1	3984.1	4052.1
- `ADJ T.`	1	3984.4	4052.4
<none>		3982.7	4052.7
- `2P%`:`2P%D`	1	3984.8	4052.8
- TOR:TORD	1	3988.1	4056.1
- `Away W-L%`	1	3991.0	4059.0
- `Conf. W-L%`	1	3995.8	4063.8
- `Overall SOS`	1	3996.1	4064.1
- ADJOE:ADJDE	1	4001.6	4069.6
- `AVG PPG`:`AVG DPPG`	1	4087.4	4155.4

Step: AIC=4050.73

sweet\_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +  
ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +  
`ADJ T.` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
`AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` +  
ADJOE:ADJDE + `EFG%`:`EFGD%` + TOR:TORD + ORB:DRB + FTR:FTRD +  
`2P%`:`2P%D` + `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- `EFG%`:`EFGD%`	1	3982.7	4048.7
- `AVG PD`	1	3982.7	4048.7
- FTR:FTRD	1	3982.9	4048.9
- ORB:DRB	1	3982.9	4048.9
- `PF/G`	1	3983.0	4049.0
- `Home W-L%`	1	3983.0	4049.0
- `2P%`:`3P%`	1	3983.2	4049.2
- `3P%`:`3P%D`	1	3984.0	4050.0
- `AST/TOV`	1	3984.1	4050.1
- `ADJ T.`	1	3984.4	4050.4

<none>		3982.7	4050.7
- `2P%`:`2P%D`	1	3984.8	4050.8
+ `Overall SRS`	1	3982.7	4052.7
- TOR:TORD	1	3988.1	4054.1
- `Away W-L%`	1	3991.1	4057.1
- `Conf. W-L%`	1	3995.9	4061.9
- ADJOE:ADJDE	1	4001.7	4067.7
- `AVG PPG`:`AVG DPPG`	1	4087.4	4153.4
- `Overall SOS`	1	4199.3	4265.3

Step: AIC=4048.74

sweet\_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +  
 ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +  
 `ADJ T.` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
 `AVG PPG` + `AVG DPPG` + `AVG PD` + `AST/TOV` + `PF/G` +  
 ADJOE:ADJDE + TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`2P%D` +  
 `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- `AVG PD`	1	3982.7	4046.7
- FTR:FTRD	1	3982.9	4046.9
- ORB:DRB	1	3982.9	4046.9
- `EFG%`	1	3983.0	4047.0
- `PF/G`	1	3983.0	4047.0
- `Home W-L%`	1	3983.0	4047.0
- `2P%`:`3P%`	1	3983.2	4047.2
- `AST/TOV`	1	3984.1	4048.1
- `ADJ T.`	1	3984.4	4048.4
<none>		3982.7	4048.7
- `3P%`:`3P%D`	1	3984.7	4048.7
- `EFGD%`	1	3985.5	4049.5
+ `EFG%`:`EFGD%`	1	3982.7	4050.7
+ `Overall SRS`	1	3982.7	4050.7
- TOR:TORD	1	3988.2	4052.2
- `2P%`:`2P%D`	1	3989.5	4053.5
- `Away W-L%`	1	3991.1	4055.1
- `Conf. W-L%`	1	3995.9	4059.9
- ADJOE:ADJDE	1	4003.5	4067.5
- `AVG PPG`:`AVG DPPG`	1	4087.4	4151.4
- `Overall SOS`	1	4200.5	4264.5

Step: AIC=4046.75

sweet\_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +

ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +  
`ADJ T.` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
`AVG PPG` + `AVG DPPG` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +  
TOR:TORD + ORB:DRB + FTR:FTRD + `2P%`:`2P%D` + `2P%`:`3P%` +  
`3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- FTR:FTRD	1	3982.9	4044.9
- ORB:DRB	1	3982.9	4044.9
- `EFG%`	1	3983.0	4045.0
- `PF/G`	1	3983.0	4045.0
- `Home W-L%`	1	3983.0	4045.0
- `2P%`:`3P%`	1	3983.2	4045.2
- `AST/TOV`	1	3984.1	4046.1
- `ADJ T.`	1	3984.4	4046.4
<none>		3982.7	4046.7
- `3P%`:`3P%D`	1	3984.8	4046.8
- `EFGD%`	1	3985.5	4047.5
+ `AVG PD`	1	3982.7	4048.7
+ `EFG%`:`EFGD%`	1	3982.7	4048.7
+ `Overall SRS`	1	3982.7	4048.7
- TOR:TORD	1	3988.2	4050.2
- `2P%`:`2P%D`	1	3989.6	4051.6
- `Away W-L%`	1	3991.5	4053.5
- `Conf. W-L%`	1	3996.0	4058.0
- ADJOE:ADJDE	1	4003.5	4065.5
- `AVG PPG`:`AVG DPPG`	1	4087.5	4149.5
- `Overall SOS`	1	4200.5	4262.5

Step: AIC=4044.89

sweet\_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +  
ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +  
`ADJ T.` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
`AVG PPG` + `AVG DPPG` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +  
TOR:TORD + ORB:DRB + `2P%`:`2P%D` + `2P%`:`3P%` + `3P%`:`3P%D` +  
`AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- ORB:DRB	1	3983.1	4043.1
- `EFG%`	1	3983.1	4043.1
- `PF/G`	1	3983.2	4043.2
- `Home W-L%`	1	3983.2	4043.2
- `2P%`:`3P%`	1	3983.3	4043.3

- `AST/TOV`	1	3984.3	4044.3
- `ADJ T.`	1	3984.6	4044.6
- `3P%`:`3P%D`	1	3984.9	4044.9
<none>		3982.9	4044.9
- FTRD	1	3985.0	4045.0
- `EFGD%`	1	3985.7	4045.7
- FTR	1	3986.5	4046.5
+ FTR:FTRD	1	3982.7	4046.7
+ `AVG PD`	1	3982.9	4046.9
+ `EFG%`:`EFGD%`	1	3982.9	4046.9
+ `Overall SRS`	1	3982.9	4046.9
- TOR:TORD	1	3988.7	4048.7
- `2P%`:`2P%D`	1	3989.7	4049.7
- `Away W-L%`	1	3991.7	4051.7
- `Conf. W-L%`	1	3996.1	4056.1
- ADJOE:ADJDE	1	4003.6	4063.6
- `AVG PPG`:`AVG DPPG`	1	4087.6	4147.6
- `Overall SOS`	1	4202.7	4262.7

Step: AIC=4043.06

sweet\_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +  
 ORB + DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` +  
 `ADJ T.` + `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
 `AVG PPG` + `AVG DPPG` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +  
 TOR:TORD + `2P%`:`2P%D` + `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- ORB	1	3983.3	4041.3
- `EFG%`	1	3983.3	4041.3
- `PF/G`	1	3983.4	4041.4
- `Home W-L%`	1	3983.4	4041.4
- `2P%`:`3P%`	1	3983.5	4041.5
- DRB	1	3983.5	4041.5
- `AST/TOV`	1	3984.5	4042.5
- `ADJ T.`	1	3984.8	4042.8
- `3P%`:`3P%D`	1	3985.1	4043.1
<none>		3983.1	4043.1
- FTRD	1	3985.2	4043.2
- `EFGD%`	1	3985.9	4043.9
- FTR	1	3986.6	4044.6
+ ORB:DRB	1	3982.9	4044.9
+ FTR:FTRD	1	3982.9	4044.9
+ `AVG PD`	1	3983.0	4045.0

+ `EFG%`:`EFGD%`	1	3983.1	4045.1
+ `Overall SRS`	1	3983.1	4045.1
- TOR:TORD	1	3988.7	4046.7
- `2P%`:`2P%D`	1	3989.8	4047.8
- `Away W-L%`	1	3991.8	4049.8
- `Conf. W-L%`	1	3996.4	4054.4
- ADJOE:ADJDE	1	4003.8	4061.8
- `AVG PPG`:`AVG DPPG`	1	4087.6	4145.6
- `Overall SOS`	1	4203.9	4261.9

Step: AIC=4041.25

sweet\_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +  
 DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` +  
 `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +  
 `AVG PPG` + `AVG DPPG` + `AST/TOV` + `PF/G` + ADJOE:ADJDE +  
 TOR:TORD + `2P%`:`2P%D` + `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- `PF/G`	1	3983.5	4039.5
- `Home W-L%`	1	3983.6	4039.6
- DRB	1	3983.6	4039.6
- `EFG%`	1	3983.6	4039.6
- `2P%`:`3P%`	1	3983.7	4039.7
- `AST/TOV`	1	3984.6	4040.6
- `ADJ T.`	1	3985.0	4041.0
- `3P%`:`3P%D`	1	3985.2	4041.2
<none>		3983.3	4041.3
- FTRD	1	3985.3	4041.3
- `EFGD%`	1	3986.0	4042.0
- FTR	1	3986.9	4042.9
+ ORB	1	3983.1	4043.1
+ FTR:FTRD	1	3983.1	4043.1
+ `AVG PD`	1	3983.2	4043.2
+ `EFG%`:`EFGD%`	1	3983.3	4043.3
+ `Overall SRS`	1	3983.3	4043.3
- TOR:TORD	1	3988.8	4044.8
- `2P%`:`2P%D`	1	3989.8	4045.8
- `Away W-L%`	1	3992.1	4048.1
- `Conf. W-L%`	1	3996.6	4052.6
- ADJOE:ADJDE	1	4003.8	4059.8
- `AVG PPG`:`AVG DPPG`	1	4087.7	4143.7
- `Overall SOS`	1	4204.4	4260.4

Step: AIC=4039.53

```
sweet_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +
  DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` +
  `Overall SOS` + `Conf. W-L%` + `Home W-L%` + `Away W-L%` +
  `AVG PPG` + `AVG DPPG` + `AST/TOV` + ADJOE:ADJDE + TOR:TORD +
  `2P%`:`2P%D` + `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- `Home W-L%`	1	3983.8	4037.8
- `EFG%`	1	3983.9	4037.9
- DRB	1	3984.0	4038.0
- `2P%`:`3P%`	1	3984.0	4038.0
- `ADJ T.`	1	3985.2	4039.2
- FTRD	1	3985.3	4039.3
- `3P%`:`3P%D`	1	3985.5	4039.5
<none>		3983.5	4039.5
- `AST/TOV`	1	3985.6	4039.6
- `EFGD%`	1	3986.3	4040.3
- FTR	1	3987.1	4041.1
+ `PF/G`	1	3983.3	4041.3
+ ORB	1	3983.4	4041.4
+ FTR:FTRD	1	3983.4	4041.4
+ `AVG PD`	1	3983.5	4041.5
+ `Overall SRS`	1	3983.5	4041.5
+ `EFG%`:`EFGD%`	1	3983.5	4041.5
- TOR:TORD	1	3989.2	4043.2
- `2P%`:`2P%D`	1	3990.4	4044.4
- `Away W-L%`	1	3992.5	4046.5
- `Conf. W-L%`	1	3996.9	4050.9
- ADJOE:ADJDE	1	4004.2	4058.2
- `AVG PPG`:`AVG DPPG`	1	4087.8	4141.8
- `Overall SOS`	1	4207.6	4261.6

Step: AIC=4037.82

```
sweet_sixteen ~ ADJOE + ADJDE + `EFG%` + `EFGD%` + TOR + TORD +
  DRB + FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` +
  `Overall SOS` + `Conf. W-L%` + `Away W-L%` + `AVG PPG` +
  `AVG DPPG` + `AST/TOV` + ADJOE:ADJDE + TOR:TORD + `2P%`:`2P%D` +
  `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- `EFG%`	1	3984.2	4036.2
- `2P%`:`3P%`	1	3984.3	4036.3



- DRB	1	3984.3	4036.3
- `ADJ T.`	1	3985.5	4037.5
- FTRD	1	3985.7	4037.7
- `3P%`:`3P%D`	1	3985.8	4037.8
<none>		3983.8	4037.8
- `AST/TOV`	1	3986.0	4038.0
- `EFGD%`	1	3986.6	4038.6
- FTR	1	3987.4	4039.4
+ `Home W-L%`	1	3983.5	4039.5
+ `PF/G`	1	3983.6	4039.6
+ ORB	1	3983.6	4039.6
+ FTR:FTRD	1	3983.7	4039.7
+ `AVG PD`	1	3983.8	4039.8
+ `Overall SRS`	1	3983.8	4039.8
+ `EFG%`:`EFGD%`	1	3983.8	4039.8
- TOR:TORD	1	3989.7	4041.7
- `2P%`:`2P%D`	1	3990.6	4042.6
- `Away W-L%`	1	4004.1	4056.1
- ADJOE:ADJDE	1	4004.7	4056.7
- `Conf. W-L%`	1	4005.2	4057.2
- `AVG PPG`:`AVG DPPG`	1	4088.7	4140.7
- `Overall SOS`	1	4211.1	4263.1

Step: AIC=4036.17

sweet\_sixteen ~ ADJOE + ADJDE + `EFGD%` + TOR + TORD + DRB +  
 FTR + FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` +  
 `Overall SOS` + `Conf. W-L%` + `Away W-L%` + `AVG PPG` +  
 `AVG DPPG` + `AST/TOV` + ADJOE:ADJDE + TOR:TORD + `2P%`:`2P%D` +  
 `2P%`:`3P%` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- DRB	1	3984.6	4034.6
- `2P%`:`3P%`	1	3984.7	4034.7
- `ADJ T.`	1	3985.9	4035.9
- FTRD	1	3986.0	4036.0
<none>		3984.2	4036.2
- `3P%`:`3P%D`	1	3986.2	4036.2
- `AST/TOV`	1	3986.3	4036.3
- `EFGD%`	1	3986.9	4036.9
- FTR	1	3987.6	4037.6
+ `EFG%`	1	3983.8	4037.8
+ ORB	1	3983.8	4037.8
+ `Home W-L%`	1	3983.9	4037.9

+ `PF/G`	1	3983.9	4037.9
+ FTR:FTRD	1	3984.1	4038.1
+ `AVG PD`	1	3984.2	4038.2
+ `Overall SRS`	1	3984.2	4038.2
- TOR:TORD	1	3990.0	4040.0
- `2P%`:`2P%D`	1	3991.3	4041.3
- `Away W-L%`	1	4004.5	4054.5
- `Conf. W-L%`	1	4005.6	4055.6
- ADJOE:ADJDE	1	4006.4	4056.4
- `AVG PPG`:`AVG DPPG`	1	4089.7	4139.7
- `Overall SOS`	1	4213.5	4263.5

Step: AIC=4034.64

sweet\_sixteen ~ ADJOE + ADJDE + `EFGD%` + TOR + TORD + FTR +  
 FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` + `Overall SOS` +  
 `Conf. W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` + `AST/TOV` +  
 ADJOE:ADJDE + TOR:TORD + `2P%`:`2P%D` + `2P%`:`3P%` + `3P%`:`3P%D` +  
 `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- `2P%`:`3P%`	1	3985.2	4033.2
- FTRD	1	3986.1	4034.1
- `ADJ T.`	1	3986.5	4034.5
- `AST/TOV`	1	3986.6	4034.6
<none>		3984.6	4034.6
- `3P%`:`3P%D`	1	3986.7	4034.7
- `EFGD%`	1	3987.1	4035.1
- FTR	1	3988.0	4036.0
+ DRB	1	3984.2	4036.2
+ `EFG%`	1	3984.3	4036.3
+ `PF/G`	1	3984.3	4036.3
+ `Home W-L%`	1	3984.3	4036.3
+ ORB	1	3984.5	4036.5
+ FTR:FTRD	1	3984.5	4036.5
+ `Overall SRS`	1	3984.6	4036.6
+ `AVG PD`	1	3984.6	4036.6
- TOR:TORD	1	3990.3	4038.3
- `2P%`:`2P%D`	1	3991.5	4039.5
- `Away W-L%`	1	4004.9	4052.9
- `Conf. W-L%`	1	4005.9	4053.9
- ADJOE:ADJDE	1	4006.5	4054.5
- `AVG PPG`:`AVG DPPG`	1	4091.0	4139.0
- `Overall SOS`	1	4245.2	4293.2

Step: AIC=4033.15

```
sweet_sixteen ~ ADJOE + ADJDE + `EFGD%` + TOR + TORD + FTR +
  FTRD + `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` + `Overall SOS` +
  `Conf. W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` + `AST/TOV` +
  ADJOE:ADJDE + TOR:TORD + `2P%`:`2P%D` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- FTRD	1	3986.6	4032.6
- `ADJ T.`	1	3987.0	4033.0
- `AST/TOV`	1	3987.1	4033.1
<none>		3985.2	4033.2
- `3P%`:`3P%D`	1	3987.3	4033.3
- `EFGD%`	1	3987.5	4033.5
- FTR	1	3988.4	4034.4
+ `2P%`:`3P%`	1	3984.6	4034.6
+ `EFG%`	1	3984.7	4034.7
+ DRB	1	3984.7	4034.7
+ `PF/G`	1	3984.8	4034.8
+ `Home W-L%`	1	3984.9	4034.9
+ ORB	1	3985.0	4035.0
+ FTR:FTRD	1	3985.0	4035.0
+ `Overall SRS`	1	3985.1	4035.1
+ `AVG PD`	1	3985.1	4035.1
- TOR:TORD	1	3990.5	4036.5
- `2P%`:`2P%D`	1	3992.6	4038.6
- `Away W-L%`	1	4005.2	4051.2
- `Conf. W-L%`	1	4006.5	4052.5
- ADJOE:ADJDE	1	4007.0	4053.0
- `AVG PPG`:`AVG DPPG`	1	4091.1	4137.1
- `Overall SOS`	1	4246.1	4292.1

Step: AIC=4032.6

```
sweet_sixteen ~ ADJOE + ADJDE + `EFGD%` + TOR + TORD + FTR +
  `2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` + `Overall SOS` +
  `Conf. W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` + `AST/TOV` +
  ADJOE:ADJDE + TOR:TORD + `2P%`:`2P%D` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`
```

	Df	Deviance	AIC
- `AST/TOV`	1	3988.4	4032.4
<none>		3986.6	4032.6
- `3P%`:`3P%D`	1	3988.6	4032.6
- `ADJ T.`	1	3988.7	4032.7

- `EFGD%`	1	3988.9	4032.9
- FTR	1	3989.1	4033.1
+ FTRD	1	3985.2	4033.2
+ `2P%`:`3P%`	1	3986.1	4034.1
+ `EFG%`	1	3986.2	4034.2
+ `Home W-L%`	1	3986.3	4034.3
+ ORB	1	3986.4	4034.4
+ DRB	1	3986.5	4034.5
+ `PF/G`	1	3986.6	4034.6
+ `AVG PD`	1	3986.6	4034.6
+ `Overall SRS`	1	3986.6	4034.6
- TOR:TORD	1	3991.7	4035.7
- `2P%`:`2P%D`	1	3993.6	4037.6
- `Away W-L%`	1	4006.6	4050.6
- ADJOE:ADJDE	1	4007.6	4051.6
- `Conf. W-L%`	1	4008.1	4052.1
- `AVG PPG`:`AVG DPPG`	1	4093.7	4137.7
- `Overall SOS`	1	4247.7	4291.7

Step: AIC=4032.41

sweet\_sixteen ~ ADJOE + ADJDE + `EFGD%` + TOR + TORD + FTR +  
`2P%` + `2P%D` + `3P%` + `3P%D` + `ADJ T.` + `Overall SOS` +  
`Conf. W-L%` + `Away W-L%` + `AVG PPG` + `AVG DPPG` + ADJOE:ADJDE +  
TOR:TORD + `2P%`:`2P%D` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

	Df	Deviance	AIC
- `ADJ T.`	1	3989.9	4031.9
<none>		3988.4	4032.4
- `3P%`:`3P%D`	1	3990.5	4032.5
+ `AST/TOV`	1	3986.6	4032.6
- `EFGD%`	1	3990.6	4032.6
+ FTRD	1	3987.1	4033.1
- FTR	1	3991.2	4033.2
+ `Home W-L%`	1	3988.0	4034.0
+ `2P%`:`3P%`	1	3988.0	4034.0
+ `PF/G`	1	3988.0	4034.0
+ `EFG%`	1	3988.1	4034.1
+ ORB	1	3988.3	4034.3
+ DRB	1	3988.4	4034.4
+ `Overall SRS`	1	3988.4	4034.4
+ `AVG PD`	1	3988.4	4034.4
- TOR:TORD	1	3993.6	4035.6
- `2P%`:`2P%D`	1	3995.4	4037.4

```

- `Away W-L%`          1    4008.2 4050.2
- ADJOE:ADJDE          1    4009.7 4051.7
- `Conf. W-L%`         1    4009.8 4051.8
- `AVG PPG`:`AVG DPPG` 1    4094.1 4136.1
- `Overall SOS`        1    4255.9 4297.9

```

Step: AIC=4031.86

```

sweet_sixteen ~ ADJOE + ADJDE + `EFGD%` + TOR + TORD + FTR +
  `2P%` + `2P%D` + `3P%` + `3P%D` + `Overall SOS` + `Conf. W-L%` +
  `Away W-L%` + `AVG PPG` + `AVG DPPG` + ADJOE:ADJDE + TOR:TORD +
  `2P%`:`2P%D` + `3P%`:`3P%D` + `AVG PPG`:`AVG DPPG`

```

	Df	Deviance	AIC
<none>		3989.9	4031.9
- `3P%`:`3P%D`	1	3992.3	4032.3
+ FTRD	1	3988.3	4032.3
+ `ADJ T.`	1	3988.4	4032.4
- FTR	1	3992.4	4032.4
+ `AST/TOV`	1	3988.7	4032.7
- `EFGD%`	1	3993.0	4033.0
+ `2P%`:`3P%`	1	3989.4	4033.4
+ `EFG%`	1	3989.4	4033.4
+ `Home W-L%`	1	3989.4	4033.4
+ `PF/G`	1	3989.7	4033.7
+ ORB	1	3989.7	4033.7
+ DRB	1	3989.8	4033.8
+ `AVG PD`	1	3989.9	4033.9
+ `Overall SRS`	1	3989.9	4033.9
- TOR:TORD	1	3994.8	4034.8
- `2P%`:`2P%D`	1	3996.3	4036.3
- `Away W-L%`	1	4010.0	4050.0
- `Conf. W-L%`	1	4011.1	4051.1
- ADJOE:ADJDE	1	4011.5	4051.5
- `AVG PPG`:`AVG DPPG`	1	4096.0	4136.0
- `Overall SOS`	1	4255.9	4295.9

```

`2023sr` <- read_csv("data/2023sportsreference.csv")

```

Rows: 363 Columns: 13

```

-- Column specification -----
Delimiter: ","

```

```
chr (1): School
dbl (12): G, Overall W-L%, Overall SRS, Overall SOS, Conf. W-L%, Home W-L%, ...

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
`2023analytics` <- read_csv("data/2023torvik.csv")
```

```
Rows: 363 Columns: 22
-- Column specification -----
Delimiter: ","
chr (1): TEAM
dbl (21): RK, G, WINS, LOSSES, ADJOE, ADJDE, EFG%, EFGD%, TOR, TORD, ORB, DR...

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
`2023stats` <- left_join(`2023analytics`, `2023sr`, by = c("TEAM" = "School"))

`2023teams` <- read_csv("data/2023teams.csv")
```

```
Rows: 64 Columns: 1
-- Column specification -----
Delimiter: ","
chr (1): TEAM

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
`2023stats` <- `2023stats` |>
  filter(`2023stats`$TEAM %in% `2023teams`$TEAM)

tibble(predict(round_64_model, `2023stats`)) |>
  mutate(rank = seq(1:64)) |>
  left_join(mutate(`2023stats`, rank = seq(1:64))) |>
  arrange(desc(predict(round_64_model, `2023stats`)))
```

Joining, by = "rank"

```
# A tibble: 64 x 36
  predi~1 rank   RK TEAM   G.x WINS LOSSES ADJOE ADJDE `EFG%` `EFGD%` TOR
    <dbl> <int> <dbl> <chr> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1     3.90     3     3 UCLA    34    29     5  113.  87.4  50.9  46.8  15.3
2     3.20    13    13 Kans~   34    27     7  113.  91.5  52.4  47.1  17.5
3     2.76     1     1 Hous~   34    31     3  117.   88   52.7  42.5  15.3
4     2.68     2     2 Alab~   34    29     5  115.  88.3  52.7  41.5   19
5     2.50     9     9 Texas   34    26     8  115.  91.6  52.7  47.8  16.5
6     2.21     6     6 Purd~   34    29     5  118.  92.6  52.2  47.2   17
7     2.11    12    12 San ~   32    26     6  111.  90.1  50.1  47.5  17.6
8     1.94    10    10 Gonz~   32    27     5  123.  98.6  58.5  51.7  14.6
9     1.93     8     8 Sain~   32    25     7  112.  89.1  52.5  46.7  16.4
10    1.86    11    11 Marq~   34    28     6  119.  96.1   56   51.1  15.2
# ... with 54 more rows, 24 more variables: TORD <dbl>, ORB <dbl>, DRB <dbl>,
#   FTR <dbl>, FTRD <dbl>, `2P%` <dbl>, `2P%D` <dbl>, `3P%` <dbl>,
#   `3P%D` <dbl>, `3PR` <dbl>, `3PRD` <dbl>, `ADJ T.` <dbl>, G.y <dbl>,
#   `Overall W-L%` <dbl>, `Overall SRS` <dbl>, `Overall SOS` <dbl>,
#   `Conf. W-L%` <dbl>, `Home W-L%` <dbl>, `Away W-L%` <dbl>, `AVG PPG` <dbl>,
#   `AVG DPPG` <dbl>, `AVG PD` <dbl>, `AST/TOV` <dbl>, `PF/G` <dbl>, and
#   abbreviated variable name 1: `predict(round_64_model, `2023stats`)`
```

```
tibble(predict(round_32_model, `2023stats`)) |>
  mutate(rank = seq(1:64)) |>
  left_join(mutate(`2023stats`, rank = seq(1:64))) |>
  arrange(desc(predict(round_32_model, `2023stats`)))
```

Joining, by = "rank"

```
# A tibble: 64 x 36
  predi~1 rank   RK TEAM   G.x WINS LOSSES ADJOE ADJDE `EFG%` `EFGD%` TOR
    <dbl> <int> <dbl> <chr> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1     1.77     1     1 Hous~   34    31     3  117.   88   52.7  42.5  15.3
2     1.71     3     3 UCLA    34    29     5  113.  87.4  50.9  46.8  15.3
3     1.68     2     2 Alab~   34    29     5  115.  88.3  52.7  41.5   19
4     1.22    10    10 Gonz~   32    27     5  123.  98.6  58.5  51.7  14.6
5     1.08     6     6 Purd~   34    29     5  118.  92.6  52.2  47.2   17
6     0.945    13    13 Kans~   34    27     7  113.  91.5  52.4  47.1  17.5
7     0.913     9     9 Texas   34    26     8  115.  91.6  52.7  47.8  16.5
8     0.821     4     4 Tenn~   33    23    10  111.  86.2  50.3  42.4  18.1
9     0.774     5     5 Conn~   33    25     8  119.  92.5  53.5  45.5  18.9
10    0.754     8     8 Sain~   32    25     7  112.  89.1  52.5  46.7  16.4
```

```
# ... with 54 more rows, 24 more variables: TORD <dbl>, ORB <dbl>, DRB <dbl>,
# FTR <dbl>, FTRD <dbl>, `2P%` <dbl>, `2P%D` <dbl>, `3P%` <dbl>,
# `3P%D` <dbl>, `3PR` <dbl>, `3PRD` <dbl>, `ADJ T.` <dbl>, G.y <dbl>,
# `Overall W-L%` <dbl>, `Overall SRS` <dbl>, `Overall SOS` <dbl>,
# `Conf. W-L%` <dbl>, `Home W-L%` <dbl>, `Away W-L%` <dbl>, `AVG PPG` <dbl>,
# `AVG DPPG` <dbl>, `AVG PD` <dbl>, `AST/TOV` <dbl>, `PF/G` <dbl>, and
# abbreviated variable name 1: `predict(round_32_model, `2023stats`)`
```

```
tibble(predict(sweet_sixteen_model, `2023stats`)) |>
  mutate(rank = seq(1:64)) |>
  left_join(mutate(`2023stats`, rank = seq(1:64))) |>
  arrange(desc(predict(sweet_sixteen_model, `2023stats`)))
```

Joining, by = "rank"

```
# A tibble: 64 x 36
```

	predict(swe~1	rank	RK	TEAM	G.x	WINS	LOSSES	ADJOE	ADJDE	`EFG%`	`EFGD%`
	<dbl>	<int>	<dbl>	<chr>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
1	1.49	13	13	Kans~	34	27	7	113.	91.5	52.4	47.1
2	1.39	3	3	UCLA	34	29	5	113.	87.4	50.9	46.8
3	1.39	1	1	Hous~	34	31	3	117.	88	52.7	42.5
4	1.19	2	2	Alab~	34	29	5	115.	88.3	52.7	41.5
5	0.530	6	6	Purd~	34	29	5	118.	92.6	52.2	47.2
6	0.425	9	9	Texas	34	26	8	115.	91.6	52.7	47.8
7	0.240	22	22	Texa~	34	25	9	113.	94.8	49	47.9
8	0.129	12	12	San ~	32	26	6	111.	90.1	50.1	47.5
9	0.00623	11	11	Marq~	34	28	6	119.	96.1	56	51.1
10	-0.00623	5	5	Conn~	33	25	8	119.	92.5	53.5	45.5

```
# ... with 54 more rows, 25 more variables: TOR <dbl>, TORD <dbl>, ORB <dbl>,
# DRB <dbl>, FTR <dbl>, FTRD <dbl>, `2P%` <dbl>, `2P%D` <dbl>, `3P%` <dbl>,
# `3P%D` <dbl>, `3PR` <dbl>, `3PRD` <dbl>, `ADJ T.` <dbl>, G.y <dbl>,
# `Overall W-L%` <dbl>, `Overall SRS` <dbl>, `Overall SOS` <dbl>,
# `Conf. W-L%` <dbl>, `Home W-L%` <dbl>, `Away W-L%` <dbl>, `AVG PPG` <dbl>,
# `AVG DPPG` <dbl>, `AVG PD` <dbl>, `AST/TOV` <dbl>, `PF/G` <dbl>, and
# abbreviated variable name ...
```