OKC Project

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11/05/2019

R Markdown

```
library("dplyr")
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library("ggplot2")
library("broom")
library("knitr")
library("cowplot")
```

```
##
## Attaching package: 'cowplot'
```

```
## The following object is masked from 'package:ggplot2':
##
##     ggsave
```

```
library("readr")
library("arm")
```

```
## Loading required package: MASS
```

```
##
## Attaching package: 'MASS'
```

```
## The following object is masked from 'package:dplyr':
##
##     select
```

```
## Loading required package: Matrix
```

```
## Loading required package: lme4
```

```
##
## arm (Version 1.10-1, built: 2018-4-12)
```

```
## Working directory is /cloud/project/STA 210/OKC
```

```
library("olsrr")
```

```
##
## Attaching package: 'olsrr'
```

```
## The following object is masked from 'package:MASS':
##
##     cement
```

```
## The following object is masked from 'package:datasets':
##
##     rivers
```

```
library("caret")
```

```
## Loading required package: lattice
```

```
all_nba <- read.csv("all-nba-okc-dataset.csv")
glimpse(all_nba)
```

```
## Observations: 13,760
## Variables: 101
## $ ID                     <int> 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 1...
## $ Player                 <fct> Allen Leavell, Alvin Robertson, Andre Tu...
## $ Tm                     <fct> HOU, SAS, MIL, SAS, TOT, MIA, SEA, UTA, ...
## $ Year.End               <int> 1989, 1989, 1989, 1989, 1989, 1989, 1989...
## $ Rk                     <int> 179, 257, 316, 29, 157, 299, 148, 172, 1...
## $ Pos                    <fct> SG, SG, PG, SG, SG, PG, PG, SG, SG, PG, ...
## $ Pos_Rev                <fct> SG, SG, PG, SG, SG, PG, PG, SG, SG, PG, ...
## $ All.NBA.TEAM.Yes...No <fct> No, No, No, No, No, No, No, No, No, No, ...
## $ All.NBA.Team           <fct> N/A, N/A, N/A, N/A, N/A, N/A, N/A, N/A, ...
## $ Age                    <int> 31, 26, 24, 25, 26, 23, 23, 24, 28, 33, ...
## $ G                      <int> 55, 65, 4, 18, 33, 21, 43, 19, 46, 78, 8...
## $ GS                     <int> 3, 65, 0, 5, 0, 7, 0, 0, 9, 4, 54, 2, 73...
## $ MP_Total               <int> 627, 2287, 13, 438, 196, 368, 291, 176, ...
## $ FG_Total               <int> 65, 465, 3, 72, 29, 60, 29, 12, 140, 183...
## $ FGA_Total              <int> 188, 962, 6, 144, 79, 151, 83, 33, 300, ...
## $ FG._Total              <dbl> 0.346, 0.483, 0.500, 0.500, 0.367, 0.397...
## $ X3P_Total              <int> 5, 9, 0, 1, 4, 0, 1, 0, 19, 32, 0, 5, 77...
## $ X3PA_Total             <int> 41, 45, 0, 5, 16, 2, 9, 1, 54, 102, 13, ...
## $ X3P._Total             <dbl> 0.122, 0.200, NA, 0.200, 0.250, 0.000, 0...
## $ X2P_Total              <int> 60, 456, 3, 71, 25, 60, 28, 12, 121, 151...
## $ X2PA_Total             <int> 147, 917, 6, 139, 63, 149, 74, 32, 246, ...
## $ X2P._Total             <dbl> 0.408, 0.497, 0.500, 0.511, 0.397, 0.403...
## $ eFG._Total             <dbl> 0.359, 0.488, 0.500, 0.503, 0.392, 0.397...
## $ FT_Total               <int> 44, 183, 0, 10, 14, 24, 9, 6, 42, 99, 10...
## $ FTA_Total              <int> 60, 253, 0, 15, 16, 32, 16, 11, 75, 123,...
## $ FT._Total              <dbl> 0.733, 0.723, NA, 0.667, 0.875, 0.750, 0...
## $ ORB_Total              <int> 13, 157, 0, 25, 14, 11, 11, 4, 29, 14, 1...
## $ DRB_Total              <int> 40, 227, 3, 31, 14, 23, 13, 7, 99, 94, 2...
## $ TRB_Total              <int> 53, 384, 3, 56, 28, 34, 24, 11, 128, 108...
## $ AST_Total              <int> 127, 393, 0, 29, 17, 43, 73, 20, 50, 242...
## $ STL_Total              <int> 25, 197, 2, 18, 11, 22, 21, 9, 37, 48, 7...
## $ BLK_Total              <int> 5, 36, 0, 4, 3, 5, 3, 0, 6, 18, 27, 1, 2...
## $ TOV_Total              <int> 62, 231, 4, 22, 5, 20, 18, 13, 43, 92, 1...
## $ PF_Total               <int> 61, 259, 2, 43, 20, 37, 34, 22, 105, 151...
## $ PTS_Total              <int> 179, 1122, 6, 155, 76, 144, 68, 30, 341,...
## $ PER_ADV                <dbl> 7.7, 17.2, 3.6, 10.6, 13.4, 11.1, 10.8, ...
## $ TS._ADV                <dbl> 0.417, 0.523, 0.500, 0.515, 0.442, 0.436...
## $ X3PAr_ADV              <dbl> 0.218, 0.047, 0.000, 0.035, 0.203, 0.013...
## $ FTr_ADV                <dbl> 0.319, 0.263, 0.000, 0.104, 0.203, 0.212...
```

```
## $ ORB._ADV             <dbl> 2.3, 7.2, 0.0, 6.0, 8.1, 3.2, 4.1, 2.7, ...
## $ DRB._ADV             <dbl> 6.8, 11.4, 27.1, 8.1, 7.8, 7.3, 5.2, 4.1...
## $ TRB._ADV             <dbl> 4.6, 9.2, 13.3, 7.0, 8.0, 5.2, 4.6, 3.5,...
## $ AST._ADV             <dbl> 26.8, 25.5, 0.0, 9.3, 13.0, 18.0, 31.3, ...
## $ STL._ADV             <dbl> 1.9, 4.0, 7.5, 1.9, 2.8, 2.9, 3.5, 2.5, ...
## $ BLK._ADV             <dbl> 0.5, 0.9, 0.0, 0.5, 0.9, 0.8, 0.6, 0.0, ...
## $ TOV._ADV             <dbl> 22.4, 17.7, 40.0, 12.7, 5.5, 10.8, 16.7,...
## $ USG._ADV             <dbl> 17.7, 22.2, 31.9, 15.3, 20.1, 20.4, 14.8...
## $ OWS_ADV              <dbl> 0.0, 0.5, 1.1, -0.4, 0.4, 0.1, 0.5, 1.9,...
## $ DWS_ADV              <dbl> 1.2, 0.4, 0.8, 1.4, 0.4, 0.1, 1.0, 0.7, ...
## $ WS_ADV               <dbl> 1.2, 0.9, 1.9, 1.0, 0.8, 0.1, 1.4, 2.6, ...
## $ WS.48_ADV            <dbl> 0.065, 0.063, 0.084, 0.049, 0.062, 0.027...
## $ OBPM_ADV             <dbl> -2.3, -0.9, 0.1, -3.2, -1.6, -2.1, -2.5,...
## $ DBPM_ADV             <dbl> 1.8, -2.0, -2.4, 0.2, -0.9, -4.4, 0.7, N...
## $ BPM_ADV              <dbl> -0.6, -2.8, -2.3, -3.0, -2.5, -6.5, -1.8...
## $ VORP_ADV             <dbl> 0.3, -0.1, -0.1, -0.3, -0.1, -0.2, 0.1, ...
## $ FG_Per100            <dbl> 4.9, 9.4, 11.2, 7.6, 7.4, 7.9, 4.8, 3.3,...
## $ FGA_Per100           <dbl> 14.1, 19.4, 22.5, 15.2, 20.1, 19.9, 13.7...
## $ FG._Per100           <dbl> 0.346, 0.483, 0.500, 0.500, 0.367, 0.397...
## $ X3P_Per100           <dbl> 0.4, 0.2, 0.0, 0.1, 1.0, 0.0, 0.2, 0.0, ...
## $ X3PA_Per100          <dbl> 3.1, 0.9, 0.0, 0.5, 4.1, 0.3, 1.5, 0.3, ...
## $ X3P._Per100          <dbl> 0.122, 0.200, NA, 0.200, 0.250, 0.000, 0...
## $ X2P_Per100           <dbl> 4.5, 9.2, 11.2, 7.5, 6.4, 7.9, 4.6, 3.3,...
## $ X2PA_Per100          <dbl> 11.1, 18.5, 22.5, 14.6, 16.0, 19.6, 12.2...
## $ X2P._Per100          <dbl> 0.408, 0.497, 0.500, 0.511, 0.397, 0.403...
## $ FT_Per100            <dbl> 3.3, 3.7, 0.0, 1.1, 3.6, 3.2, 1.5, 1.7, ...
## $ FTA_Per100           <dbl> 4.5, 5.1, 0.0, 1.6, 4.1, 4.2, 2.6, 3.1, ...
## $ FT._Per100           <dbl> 0.733, 0.723, NA, 0.667, 0.875, 0.750, 0...
## $ ORB_Per100           <dbl> 1.0, 3.2, 0.0, 2.6, 3.6, 1.4, 1.8, 1.1, ...
## $ DRB_Per100           <dbl> 3.0, 4.6, 11.2, 3.3, 3.6, 3.0, 2.1, 1.9,...
## $ TRB_Per100           <dbl> 4.0, 7.7, 11.2, 5.9, 7.1, 4.5, 4.0, 3.1,...
## $ AST_Per100           <dbl> 9.6, 7.9, 0.0, 3.1, 4.3, 5.7, 12.0, 5.6,...
## $ STL_Per100           <dbl> 1.9, 4.0, 7.5, 1.9, 2.8, 2.9, 3.5, 2.5, ...
## $ BLK_Per100           <dbl> 0.4, 0.7, 0.0, 0.4, 0.8, 0.7, 0.5, 0.0, ...
## $ TOV_Per100           <dbl> 4.7, 4.7, 15.0, 2.3, 1.3, 2.6, 3.0, 3.6,...
## $ PF_Per100            <dbl> 4.6, 5.2, 7.5, 4.5, 5.1, 4.9, 5.6, 6.1, ...
## $ PTS_Per100           <dbl> 13.5, 22.6, 22.5, 16.3, 19.3, 19.0, 11.2...
## $ ORtg_Per100          <int> 123, 107, 89, 96, 110, 105, 80, 101, 110...
## $ DRtg_Per100          <int> 104, 106, 106, 91, 109, 104, 115, 103, 1...
## $ MP_PerGame           <dbl> 11.4, 35.2, 3.3, 24.3, 5.9, 17.5, 6.8, 9...
## $ FG_PerGame           <dbl> 1.2, 7.2, 0.8, 4.0, 0.9, 2.9, 0.7, 0.6, ...
## $ FGA_PerGame          <dbl> 3.4, 14.8, 1.5, 8.0, 2.4, 7.2, 1.9, 1.7,...
## $ FG._PerGame          <dbl> 0.346, 0.483, 0.500, 0.500, 0.367, 0.397...
## $ X3P_PerGame          <dbl> 0.1, 0.1, 0.0, 0.1, 0.1, 0.0, 0.0, 0.0, ...
## $ X3PA_PerGame         <dbl> 0.7, 0.7, 0.0, 0.3, 0.5, 0.1, 0.2, 0.1, ...
## $ X3P._PerGame         <dbl> 0.122, 0.200, NA, 0.200, 0.250, 0.000, 0...
## $ X2P_PerGame          <dbl> 1.1, 7.0, 0.8, 3.9, 0.8, 2.9, 0.7, 0.6, ...
## $ X2PA_PerGame         <dbl> 2.7, 14.1, 1.5, 7.7, 1.9, 7.1, 1.7, 1.7,...
## $ X2P._PerGame         <dbl> 0.408, 0.497, 0.500, 0.511, 0.397, 0.403...
## $ eFG._PerGame         <dbl> 0.359, 0.488, 0.500, 0.503, 0.392, 0.397...
## $ FT_PerGame           <dbl> 0.8, 2.8, 0.0, 0.6, 0.4, 1.1, 0.2, 0.3, ...
## $ FTA_PerGame          <dbl> 1.1, 3.9, 0.0, 0.8, 0.5, 1.5, 0.4, 0.6, ...
## $ FT._PerGame          <dbl> 0.733, 0.723, NA, 0.667, 0.875, 0.750, 0...
## $ ORB_PerGame          <dbl> 0.2, 2.4, 0.0, 1.4, 0.4, 0.5, 0.3, 0.2, ...
```

```
## $ DRB_PerGame           <dbl> 0.7, 3.5, 0.8, 1.7, 0.4, 1.1, 0.3, 0.4, ...
## $ TRB_PerGame           <dbl> 1.0, 5.9, 0.8, 3.1, 0.8, 1.6, 0.6, 0.6, ...
## $ AST_PerGame           <dbl> 2.3, 6.0, 0.0, 1.6, 0.5, 2.0, 1.7, 1.1, ...
## $ STL_PerGame           <dbl> 0.5, 3.0, 0.5, 1.0, 0.3, 1.0, 0.5, 0.5, ...
## $ BLK_PerGame           <dbl> 0.1, 0.6, 0.0, 0.2, 0.1, 0.2, 0.1, 0.0, ...
## $ TOV_PerGame           <dbl> 1.1, 3.6, 1.0, 1.2, 0.2, 1.0, 0.4, 0.7, ...
## $ PF_PerGame            <dbl> 1.1, 4.0, 0.5, 2.4, 0.6, 1.8, 0.8, 1.2, ...
## $ PS.G_PerGame          <dbl> 3.3, 17.3, 1.5, 8.6, 2.3, 6.9, 1.6, 1.6,...
```

```
all_nba$All.NBA.TEAM.Yes...No = factor(all_nba$All.NBA.TEAM.Yes...No)
levels(all_nba$All.NBA.TEAM.Yes...No)
```

```
## [1] "No"  "Yes"
```

```
all_nba_mean_centered <- all_nba %>%
  group_by(Year.End) %>%
  mutate(G  = G - mean(G),
         GS = GS - mean(GS),
         MP_Total   = MP_Total - mean(MP_Total, na.rm=TRUE),
         FG_Total   = FG_Total - mean(FG_Total, na.rm=TRUE),
         FGA_Total  = FGA_Total - mean(FGA_Total, na.rm=TRUE),
         FG._Total  = FG._Total - mean(FG._Total, na.rm=TRUE),
         X3P_Total  = X3P_Total - mean(X3P_Total, na.rm=TRUE),
         X3PA_Total = X3PA_Total - mean(X3PA_Total, na.rm=TRUE),
         X3P._Total = X3P._Total - mean(X3P._Total, na.rm=TRUE),
         X2P_Total  = X2P_Total - mean(X2P_Total, na.rm=TRUE),
         X2PA_Total = X2PA_Total - mean(X2PA_Total, na.rm=TRUE),
         X2P._Total = X2P._Total - mean(X2P._Total, na.rm=TRUE),
         eFG._Total = eFG._Total - mean(eFG._Total, na.rm=TRUE),
         FT_Total   = FT_Total - mean(FT_Total, na.rm=TRUE),
         FTA_Total = FTA_Total - mean(FTA_Total, na.rm=TRUE),
         FT._Total  = FT._Total - mean(FT._Total, na.rm=TRUE),
         ORB_Total  = ORB_Total - mean(ORB_Total, na.rm=TRUE),
         DRB_Total  = DRB_Total - mean(DRB_Total, na.rm=TRUE),
         TRB_Total  = TRB_Total - mean(TRB_Total, na.rm=TRUE),
         AST_Total  = AST_Total - mean(AST_Total, na.rm=TRUE),
         STL_Total  = STL_Total - mean(STL_Total, na.rm=TRUE),
         BLK_Total  = BLK_Total - mean(BLK_Total, na.rm=TRUE),
         TOV_Total  = TOV_Total - mean(TOV_Total, na.rm=TRUE),
         PF_Total   = PF_Total - mean(PF_Total, na.rm=TRUE),
         PTS_Total  = PTS_Total - mean(PTS_Total, na.rm=TRUE),
         PER_ADV    = PER_ADV - mean(PER_ADV, na.rm=TRUE),
         TS._ADV    = TS._ADV - mean(TS._ADV, na.rm=TRUE),
         X3PAr_ADV  = X3PAr_ADV - mean(X3PAr_ADV, na.rm=TRUE),
         FTr_ADV    = FTr_ADV - mean(FTr_ADV, na.rm=TRUE),
         ORB._ADV   = ORB._ADV - mean(ORB._ADV, na.rm=TRUE),
         DRB._ADV   = DRB._ADV - mean(DRB._ADV, na.rm=TRUE),
         TRB._ADV   = TRB._ADV - mean(TRB._ADV, na.rm=TRUE),
         AST._ADV   = AST._ADV - mean(AST._ADV, na.rm=TRUE),
         STL._ADV   = STL._ADV - mean(STL._ADV, na.rm=TRUE),
         BLK._ADV   = BLK._ADV - mean(BLK._ADV, na.rm=TRUE),
         TOV._ADV   = TOV._ADV - mean(TOV._ADV, na.rm=TRUE),
         USG._ADV   = USG._ADV - mean(USG._ADV, na.rm=TRUE),
         OWS_ADV    = OWS_ADV - mean(OWS_ADV, na.rm=TRUE),
         DWS_ADV    = DWS_ADV - mean(DWS_ADV, na.rm=TRUE),
```

```
        WS_ADV = WS_ADV - mean(WS_ADV, na.rm=TRUE),
        WS.48_ADV  = WS.48_ADV - mean(WS.48_ADV, na.rm=TRUE),
        OBPM_ADV   = OBPM_ADV - mean(OBPM_ADV, na.rm=TRUE),
        DBPM_ADV   = DBPM_ADV - mean(DBPM_ADV, na.rm=TRUE),
        BPM_ADV    = BPM_ADV - mean(BPM_ADV, na.rm=TRUE),
        VORP_ADV   = VORP_ADV - mean(VORP_ADV, na.rm=TRUE),
        FG_Per100  = FG_Per100 - mean(FG_Per100, na.rm=TRUE),
        FGA_Per100 = FGA_Per100 - mean(FGA_Per100, na.rm=TRUE),
        FG._Per100 = FG._Per100 - mean(FG._Per100, na.rm=TRUE),
        X3P_Per100 = X3P_Per100 - mean(X3P_Per100, na.rm=TRUE),
        X3PA_Per100    = X3PA_Per100 - mean(X3PA_Per100, na.rm=TRUE),
        X3P._Per100    = X3P._Per100 - mean(X3P._Per100, na.rm=TRUE),
        X2P_Per100 = X2P_Per100 - mean(X2P_Per100, na.rm=TRUE),
        X2PA_Per100    = X2PA_Per100 - mean(X2PA_Per100, na.rm=TRUE),
        X2P._Per100    = X2P._Per100 - mean(X2P._Per100, na.rm=TRUE),
        FT_Per100  = FT_Per100 - mean(FT_Per100, na.rm=TRUE),
        FTA_Per100 = FTA_Per100 - mean(FTA_Per100, na.rm=TRUE),
        FT._Per100 = FT._Per100 - mean(FT._Per100, na.rm=TRUE),
        ORB_Per100 = ORB_Per100 - mean(ORB_Per100, na.rm=TRUE),
        DRB_Per100 = DRB_Per100 - mean(DRB_Per100, na.rm=TRUE),
        TRB_Per100 = TRB_Per100 - mean(TRB_Per100, na.rm=TRUE),
        AST_Per100 = AST_Per100 - mean(AST_Per100, na.rm=TRUE),
        STL_Per100 = STL_Per100 - mean(STL_Per100, na.rm=TRUE),
        BLK_Per100 = BLK_Per100 - mean(BLK_Per100, na.rm=TRUE),
        TOV_Per100 = TOV_Per100 - mean(TOV_Per100, na.rm=TRUE),
        PF_Per100  = PF_Per100 - mean(PF_Per100, na.rm=TRUE),
        PTS_Per100 = PTS_Per100 - mean(PTS_Per100, na.rm=TRUE),
        ORtg_Per100    = ORtg_Per100 - mean(ORtg_Per100, na.rm=TRUE),
        DRtg_Per100    = DRtg_Per100 - mean(DRtg_Per100, na.rm=TRUE),
        MP_PerGame = MP_PerGame - mean(MP_PerGame, na.rm=TRUE),
        FG_PerGame = FG_PerGame - mean(FG_PerGame, na.rm=TRUE),
        FGA_PerGame    = FGA_PerGame - mean(FGA_PerGame, na.rm=TRUE),
        FG._PerGame    = FG._PerGame - mean(FG._PerGame, na.rm=TRUE),
        X3P_PerGame    = X3P_PerGame - mean(X3P_PerGame, na.rm=TRUE),
        X3PA_PerGame= X3PA_PerGame - mean(X3PA_PerGame, na.rm=TRUE),
        X3P._PerGame= X3P._PerGame - mean(X3P._PerGame, na.rm=TRUE),
        X2P_PerGame    = X2P_PerGame - mean(X2P_PerGame, na.rm=TRUE),
        X2PA_PerGame= X2PA_PerGame - mean(X2PA_PerGame, na.rm=TRUE),
        X2P._PerGame   = X2P._PerGame - mean(X2P._PerGame, na.rm=TRUE),
        eFG._PerGame   = eFG._PerGame - mean(eFG._PerGame, na.rm=TRUE),
        FT_PerGame = FT_PerGame - mean(FT_PerGame, na.rm=TRUE),
        FTA_PerGame    = FTA_PerGame - mean(FTA_PerGame, na.rm=TRUE),
        FT._PerGame    = FT._PerGame - mean(FT._PerGame, na.rm=TRUE),
        ORB_PerGame    = ORB_PerGame - mean(ORB_PerGame, na.rm=TRUE),
        DRB_PerGame    = DRB_PerGame - mean(DRB_PerGame, na.rm=TRUE),
        TRB_PerGame    = TRB_PerGame - mean(TRB_PerGame, na.rm=TRUE),
        AST_PerGame    = AST_PerGame - mean(AST_PerGame, na.rm=TRUE),
        STL_PerGame    = STL_PerGame - mean(STL_PerGame, na.rm=TRUE),
        BLK_PerGame    = BLK_PerGame - mean(BLK_PerGame, na.rm=TRUE),
        TOV_PerGame    = TOV_PerGame - mean(TOV_PerGame, na.rm=TRUE),
        PF_PerGame = PF_PerGame - mean(PF_PerGame, na.rm=TRUE),
        PS.G_PerGame= PS.G_PerGame - mean(PS.G_PerGame, na.rm=TRUE))
```

```
all_nba_mean_centered_no_NA <- all_nba_mean_centered %>%
  na.omit()
model.full <- glm(All.NBA.TEAM.Yes...No ~ G +
         #GS +
         #MP_Total +
         #FG_Total +
         #FGA_Total +
         #FG._Total +
         #X3P_Total +
         #X3PA_Total +
         #X3P._Total +
         #X2P_Total +
         #X2PA_Total +
         #X2P._Total  +
         #eFG._Total +
         #FT_Total +
         #FTA_Total  +
         #FT._Total +
         #ORB_Total +
         #DRB_Total +
         #TRB_Total +
         #AST_Total +
         #STL_Total +
         #BLK_Total +
         #TOV_Total +
         #PF_Total +
         #PTS_Total +
         #PER_ADV +
         #TS._ADV +
         #X3PAr_ADV +
         #FTr_ADV +
         #ORB._ADV +
         #DRB._ADV +
         #TRB._ADV +
         #AST._ADV +
         #STL._ADV +
         #BLK._ADV +
         #TOV._ADV +
         #USG._ADV +
         #OWS_ADV +
         #DWS_ADV +
         #WS_ADV +
         #WS.48_ADV +
         #OBPM_ADV +
         #DBPM_ADV +
         #BPM_ADV +
         #VORP_ADV +
         #FG_Per100 +
         #FGA_Per100 +
         #FG._Per100 +
         #X3P_Per100 +
         #X3PA_Per100 +
         #X3P._Per100 +
```

```
        #X2P_Per100 +
        #X2PA_Per100 +
        X2P._Per100 +
        #FT_Per100 +
        FTA_Per100 +
        FT._Per100 +
        #ORB_Per100 +
        #DRB_Per100 +
        TRB_Per100 +
        #AST_Per100 +
        STL_Per100 +
        #BLK_Per100 +
        #TOV_Per100 +
        #PF_Per100 +
        #PTS_Per100 +
        #ORtg_Per100 +
        #DRtg_Per100 +
        #MP_PerGame +
        #FG_PerGame +
        #FGA_PerGame +
        #FG._PerGame +
        #X3P_PerGame +
        #X3PA_PerGame +
        #X3P._PerGame +
        #X2P_PerGame +
        #X2PA_PerGame +
        #X2P._PerGame +
        #eFG._PerGame +
        #FT_PerGame +
        #FTA_PerGame +
        #FT._PerGame +
        #ORB_PerGame +
        #DRB_PerGame +
        #TRB_PerGame +
        #AST_PerGame +
        #STL_PerGame +
        #BLK_PerGame +
        #TOV_PerGame +
        #PF_PerGame +
        PS.G_PerGame, family=binomial,data=all_nba_mean_centered_no_NA) #model will all possible varia
AIC(model.full)
```

```
## [1] 1101.906
```

```
stepAIC(model.full, direction= "forward")
```

```
## Start:  AIC=1101.91
## All.NBA.TEAM.Yes...No ~ G + X2P._Per100 + FTA_Per100 + FT._Per100 +
##     TRB_Per100 + STL_Per100 + PS.G_PerGame
##
## Call:  glm(formula = All.NBA.TEAM.Yes...No ~ G + X2P._Per100 + FTA_Per100 +
##     FT._Per100 + TRB_Per100 + STL_Per100 + PS.G_PerGame, family = binomial,
##     data = all_nba_mean_centered_no_NA)
##
```

```
## Coefficients:
##  (Intercept)             G   X2P._Per100    FTA_Per100    FT._Per100
##     -9.20953       0.06993      18.97008       0.10239       2.59396
##   TRB_Per100    STL_Per100  PS.G_PerGame
##      0.16545       0.90200       0.43816
##
## Degrees of Freedom: 9004 Total (i.e. Null);  8997 Residual
## Null Deviance:       3061
## Residual Deviance: 1086  AIC: 1102
```