

# FinalReport

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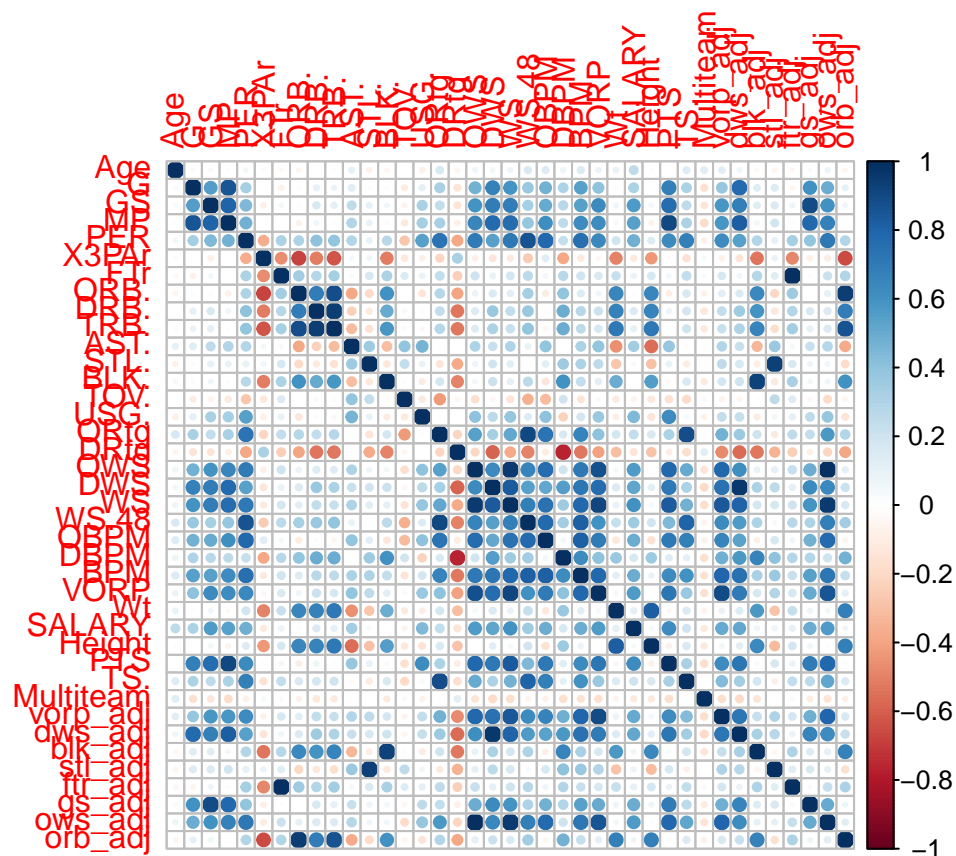
# Introduction

## Variable Selection

```
data <- read.csv("data/PlayerData.csv")[, -1]
```

### Correlation Matrix

```
corrplot(cor(data[apply(data, is.numeric)]))
```



## Stepwise Regression Models

```
data <- read_csv("data/PlayerData.csv")
```

```
## New names:
```

```

## Rows: 385 Columns: 49
## -- Column specification
## ----- Delimiter: "," chr
## (9): Player, Tm, Place_of_Birth, Pos, Ht, Birth.Date, College, Internat... dbl
## (40): ...1, Age, G, GS, MP, PER, X3PAr, FTr, ORB., DRB., TRB., AST., STL...
## 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.
## * `` -> `...1`

data_regressors <- data %>% mutate(logsal = log(SALARY)) %>%
  dplyr::select(logsal, Age, G, GS, gs_adj, MP, PER, X3PAr, FTr, ftr_adj, ORB., orb_adj, DRB., TRB., AST,
               STL., stl_adj, BLK., blk_adj, TOV., USG., ORtg, DRtg, OWS, ows_adj, DWS, dws_adj, WS.48,
               OBPM, DBPM, VORP, vorp_adj, Pos, Height, PTS, TS., International, Conference)
attach(data_regressors)
Pos <- as.factor(Pos)
International <- as.factor(International)
Conference <- as.factor(Conference)

null = lm(logsal ~ 1, data = data_regressors)
full = lm(logsal ~ ., data = data_regressors)
summary(full)

##
## Call:
## lm(formula = logsal ~ ., data = data_regressors)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -3.01123 -0.45112  0.01986  0.53385  1.93193
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    4.4225997   6.8296551   0.648  0.51771
## Age             0.0630723   0.0108876   5.793 1.57e-08 ***
## G             -0.0203828   0.0061556  -3.311  0.00103 **
## GS            -0.0006357   0.0044519  -0.143  0.88654
## gs_adj         0.0165965   0.0752748   0.220  0.82563
## MP             0.0005305   0.0003673   1.445  0.14951
## PER           -0.0174388   0.0784872  -0.222  0.82430
## X3PAr          0.6974562   0.6075721   1.148  0.25180
## FTr           4.1859741   3.5760217   1.171  0.24259
## ftr_adj       -6.1036319   4.9320476  -1.238  0.21674
## ORB.          -0.2008639   0.2006313  -1.001  0.31746
## orb_adj       0.2144035   0.2928215   0.732  0.46455
## DRB.          -0.2363441   0.1966500  -1.202  0.23026
## TRB.          0.4371859   0.3945849   1.108  0.26866
## AST.          0.0181086   0.0156213   1.159  0.24718
## STL.         -0.2181312   0.2047322  -1.065  0.28743
## stl_adj       0.6058089   0.5364506   1.129  0.25957
## BLK.          -0.0063714   0.1047194  -0.061  0.95152
## blk_adj      -0.2721569   0.3076517  -0.885  0.37698
## TOV.          0.0021125   0.0276936   0.076  0.93924
## USG.          0.0617779   0.0422083   1.464  0.14421
## ORtg          0.0220255   0.0249201   0.884  0.37740
## DRtg          0.0288892   0.0539888   0.535  0.59293

```

```
## OWS                -0.1233481  0.5093160  -0.242  0.80878
## ows_adj            8.4004018 11.6084572   0.724  0.46978
## DWS               -0.0896228  0.2381367  -0.376  0.70689
## dws_adj            1.2651898  0.7187115   1.760  0.07924 .
## WS.48             -4.9672150  5.4844609  -0.906  0.36574
## OBPM               0.1282551  0.1092672   1.174  0.24130
## DBPM               0.2533772  0.0860760   2.944  0.00347 **
## VORP              -0.2712728  0.1809745  -1.499  0.13481
## vorp_adj          -0.7052569  0.2948591  -2.392  0.01731 *
## PosC-F             0.2750336  0.3458740   0.795  0.42706
## PosF              -0.1731032  0.2057598  -0.841  0.40078
## PosF-C             0.0093911  0.2310966   0.041  0.96761
## PosF-G            -0.3437900  0.3114840  -1.104  0.27049
## PosG              -0.6538078  0.3138647  -2.083  0.03799 *
## PosG-F            -0.4935578  0.2866025  -1.722  0.08596 .
## Height             0.0037293  0.0313987   0.119  0.90553
## PTS               0.0001479  0.0005863   0.252  0.80099
## TS.               -0.9776647  3.2686250  -0.299  0.76504
## InternationalYes -0.0470952  0.1147774  -0.410  0.68183
## ConferenceMulti  -0.6674140  0.1595178  -4.184  3.65e-05 ***
## ConferenceWest   -0.0894918  0.1003389  -0.892  0.37308
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8305 on 341 degrees of freedom
## Multiple R-squared:  0.5773, Adjusted R-squared:  0.524
## F-statistic: 10.83 on 43 and 341 DF,  p-value: < 2.2e-16
```

```
bic = log(nrow(data_regressors))
stepbic_model <- stepAIC(object = null, scope = list(lower = null, upper = full),
direction = "both", k = bic)
```

```
## Start:  AIC=147.73
## logsal ~ 1
##
##           Df Sum of Sq  RSS    AIC
## + MP       1   205.936 350.46 -24.281
## + PTS       1   204.939 351.46 -23.186
## + dws_adj   1   177.276 379.12   5.983
## + DWS       1   155.441 400.96  27.542
## + GS        1   150.239 406.16  32.505
## + gs_adj    1   148.593 407.80  34.062
## + ows_adj   1   137.559 418.84  44.340
## + G         1   134.283 422.11  47.339
## + OWS       1   132.960 423.44  48.544
## + OBPM      1   126.131 430.27  54.704
## + VORP      1   116.845 439.55  62.925
## + vorp_adj  1   103.261 453.14  74.643
## + PER       1    96.356 460.04  80.465
## + WS.48     1    65.572 490.83 105.402
## + USG.      1    55.407 500.99 113.294
## + AST.      1    43.172 513.23 122.584
## + DBPM      1    40.236 516.16 124.779
## + ORtg      1    38.938 517.46 125.746
## + Age       1    33.751 522.65 129.587
```

```

## + TS.          1      28.177 528.22 133.671
## + Conference    2      33.141 523.26 135.989
## + DRtg          1      13.737 542.66 144.054
## + DRB.          1      10.839 545.56 146.105
## + stl_adj       1       8.592 547.81 147.687
## <none>          1       556.40 147.726
## + TRB.          1       6.763 549.64 148.971
## + orb_adj       1       5.968 550.43 149.527
## + blk_adj       1       5.623 550.77 149.768
## + X3PAr         1       3.600 552.80 151.180
## + International 1       2.977 553.42 151.613
## + Height        1       2.359 554.04 152.043
## + TOV.          1       2.173 554.22 152.172
## + STL.          1       1.585 554.81 152.581
## + ftr_adj       1       1.264 555.13 152.803
## + ORB.          1       0.747 555.65 153.162
## + BLK.          1       0.669 555.73 153.216
## + FTr          1       0.451 555.95 153.366
## + Pos           6      15.293 541.10 172.715
##
## Step: AIC=-24.28
## logsal ~ MP
##
##           Df Sum of Sq  RSS    AIC
## + Age      1    31.599 318.86 -54.706
## + PER      1    11.787 338.67 -31.498
## + PTS      1    10.016 340.45 -29.491
## + OBPM     1     8.947 341.51 -28.284
## + DBPM     1     7.922 342.54 -27.130
## + ows_adj  1     7.724 342.74 -26.908
## + OWS      1     7.552 342.91 -26.715
## + USG.     1     7.500 342.96 -26.655
## + WS.48    1     7.398 343.06 -26.541
## + dws_adj  1     7.237 343.23 -26.360
## + DRtg     1     6.013 344.45 -24.990
## + Height   1     5.945 344.52 -24.914
## + orb_adj  1     5.930 344.53 -24.898
## + TRB.     1     5.716 344.75 -24.659
## + AST.     1     5.664 344.80 -24.600
## + VORP     1     5.647 344.82 -24.581
## <none>     1     350.46 -24.281
## + DRB.     1     5.362 345.10 -24.263
## + Conference 2     9.952 340.51 -23.465
## + DWS      1     4.623 345.84 -23.440
## + vorp_adj 1     4.560 345.90 -23.370
## + ORB.     1     3.829 346.63 -22.556
## + X3PAr    1     3.805 346.66 -22.530
## + ORtg     1     2.919 347.54 -21.547
## + blk_adj  1     2.426 348.04 -21.001
## + gs_adj   1     2.122 348.34 -20.666
## + International 1     1.745 348.72 -20.249
## + G        1     1.657 348.81 -20.151
## + BLK.     1     1.508 348.95 -19.987
## + GS       1     1.217 349.24 -19.666

```

```

## + ftr_adj      1      0.799 349.66 -19.207
## + TS.          1      0.672 349.79 -19.066
## + FTr          1      0.618 349.84 -19.007
## + TOV.         1      0.051 350.41 -18.383
## + stl_adj      1      0.037 350.42 -18.368
## + STL.         1      0.014 350.45 -18.343
## + Pos          6     13.359 337.10 -3.524
## - MP           1    205.936 556.40 147.726
##
## Step:  AIC=-54.71
## logsal ~ MP + Age
##
##              Df Sum of Sq  RSS    AIC
## + Conference   2     16.682 302.18 -63.488
## + PTS          1     11.385 307.48 -62.751
## + USG.         1     10.980 307.88 -62.243
## + PER          1      9.861 309.00 -60.847
## + orb_adj      1      7.474 311.39 -57.884
## + Height       1      6.376 312.49 -56.529
## + TRB.         1      6.304 312.56 -56.440
## + DBPM         1      5.690 313.17 -55.685
## + DRB.         1      5.453 313.41 -55.394
## + OWS          1      5.322 313.54 -55.233
## + ows_adj      1      5.162 313.70 -55.037
## + ORB.         1      5.111 313.75 -54.974
## <none>                318.86 -54.706
## + dws_adj      1      4.642 314.22 -54.399
## + DRtg         1      4.605 314.26 -54.353
## + X3PAR        1      4.420 314.44 -54.127
## + OBPM         1      4.154 314.71 -53.801
## + VORP         1      3.468 315.40 -52.963
## + WS.48        1      3.223 315.64 -52.663
## + blk_adj      1      3.153 315.71 -52.579
## + AST.         1      3.140 315.72 -52.563
## + DWS          1      3.024 315.84 -52.421
## + G            1      2.245 316.62 -51.473
## + BLK.         1      2.202 316.66 -51.421
## + vorp_adj     1      1.725 317.14 -50.841
## + gs_adj       1      1.590 317.27 -50.677
## + International 1      1.579 317.28 -50.665
## + ftr_adj      1      1.258 317.61 -50.274
## + FTr          1      1.021 317.84 -49.988
## + GS           1      0.709 318.15 -49.609
## + ORtg         1      0.486 318.38 -49.340
## + stl_adj      1      0.273 318.59 -49.083
## + STL.         1      0.113 318.75 -48.889
## + TOV.         1      0.028 318.84 -48.786
## + TS.          1      0.000 318.86 -48.753
## + Pos          6     12.036 306.83 -33.800
## - Age          1     31.599 350.46 -24.281
## - MP           1    203.784 522.65 129.587
##
## Step:  AIC=-63.49
## logsal ~ MP + Age + Conference

```

```

##
##          Df Sum of Sq    RSS      AIC
## + USG.      1    11.271 290.91 -72.170
## + PTS       1    11.175 291.01 -72.043
## + PER       1    10.001 292.18 -70.493
## + orb_adj   1     6.275 295.91 -65.614
## + OWS       1     5.042 297.14 -64.013
## + OBPM      1     4.879 297.30 -63.801
## + ows_adj   1     4.828 297.35 -63.735
## <none>             302.18 -63.488
## + TRB.      1     4.595 297.59 -63.434
## + Height    1     4.391 297.79 -63.170
## + ORB.      1     4.116 298.06 -62.815
## + X3PAr     1     4.033 298.15 -62.707
## + AST.      1     3.904 298.28 -62.541
## + DRB.      1     3.730 298.45 -62.316
## + DBPM      1     3.300 298.88 -61.762
## + WS.48     1     2.974 299.21 -61.342
## + dws_adj   1     2.808 299.37 -61.129
## + VORP      1     2.567 299.61 -60.820
## + DRtg      1     2.501 299.68 -60.734
## + gs_adj    1     2.470 299.71 -60.694
## + G         1     2.230 299.95 -60.387
## + ftr_adj   1     1.755 300.43 -59.777
## + blk_adj   1     1.752 300.43 -59.773
## + DWS       1     1.615 300.57 -59.597
## + FTr       1     1.465 300.72 -59.406
## + BLK.      1     1.097 301.08 -58.935
## + GS        1     0.904 301.28 -58.689
## + vorp_adj  1     0.805 301.38 -58.561
## + ORtg      1     0.703 301.48 -58.431
## + International 1     0.541 301.64 -58.224
## + stl_adj   1     0.480 301.70 -58.147
## + STL.      1     0.206 301.97 -57.798
## + TOV.      1     0.070 302.11 -57.624
## + TS.       1     0.054 302.13 -57.603
## - Conference 2    16.682 318.86 -54.706
## + Pos       6     9.929 292.25 -40.631
## - Age       1    38.329 340.51 -23.465
## - MP        1   176.059 478.24 107.307
##
## Step:  AIC=-72.17
## logsal ~ MP + Age + Conference + USG.
##
##          Df Sum of Sq    RSS      AIC
## + DBPM      1     9.830 281.08 -79.451
## + orb_adj   1     9.488 281.42 -78.982
## + Height    1     6.623 284.29 -75.083
## + ORB.      1     6.039 284.87 -74.292
## + TRB.      1     5.405 285.50 -73.437
## <none>             290.91 -72.170
## + dws_adj   1     3.686 287.22 -71.126
## + DRB.      1     3.680 287.23 -71.118
## + blk_adj   1     3.270 287.64 -70.569

```

```

## + PER          1      3.148 287.76 -70.405
## + X3PAr        1      2.896 288.01 -70.068
## + gs_adj       1      2.744 288.17 -69.865
## + DRtg         1      2.668 288.24 -69.763
## + WS.48        1      2.627 288.28 -69.708
## + ows_adj      1      2.068 288.84 -68.963
## + OWS          1      2.002 288.91 -68.875
## + BLK.         1      1.972 288.94 -68.835
## + OBPM         1      1.647 289.26 -68.402
## + ORtg         1      1.586 289.32 -68.321
## + DWS          1      1.454 289.46 -68.145
## + PTS          1      1.253 289.66 -67.879
## + ftr_adj      1      0.913 290.00 -67.427
## + FTr          1      0.760 290.15 -67.224
## + VORP         1      0.739 290.17 -67.196
## + International 1      0.597 290.31 -67.007
## + stl_adj      1      0.538 290.37 -66.929
## + vorp_adj     1      0.412 290.50 -66.762
## + AST.         1      0.395 290.51 -66.740
## + GS           1      0.381 290.53 -66.721
## + TOV.         1      0.292 290.62 -66.603
## + TS.          1      0.183 290.73 -66.459
## + G            1      0.085 290.82 -66.329
## + STL.         1      0.065 290.84 -66.302
## - USG.         1     11.271 302.18 -63.488
## - Conference   2     16.974 307.88 -62.243
## + Pos          6     11.647 279.26 -52.181
## - Age          1     42.217 333.13 -25.951
## - MP           1    129.044 419.95  63.223
##
## Step:  AIC=-79.45
## logsal ~ MP + Age + Conference + USG. + DBPM
##
##           Df Sum of Sq  RSS    AIC
## <none>          281.08 -79.451
## + orb_adj      1    3.238 277.84 -77.958
## + Height       1    2.374 278.71 -76.763
## + DRtg         1    2.280 278.80 -76.632
## + OBPM         1    2.055 279.02 -76.323
## + ORB.         1    1.616 279.46 -75.718
## + ORtg         1    1.287 279.79 -75.264
## + gs_adj       1    1.262 279.82 -75.230
## + STL.         1    1.247 279.83 -75.210
## + ows_adj      1    1.033 280.05 -74.915
## + DWS          1    1.005 280.07 -74.877
## + OWS          1    0.979 280.10 -74.841
## + vorp_adj     1    0.852 280.23 -74.666
## + PTS          1    0.819 280.26 -74.621
## + TRB.         1    0.657 280.42 -74.399
## + BLK.         1    0.620 280.46 -74.347
## + WS.48        1    0.518 280.56 -74.207
## + International 1    0.514 280.57 -74.202
## + PER          1    0.490 280.59 -74.169
## + stl_adj      1    0.398 280.68 -74.042

```

```
## + VORP      1      0.324 280.76 -73.941
## - Conference 2     13.017 294.10 -73.928
## + G         1      0.247 280.83 -73.835
## + blk_adj   1      0.182 280.90 -73.747
## + AST.      1      0.174 280.91 -73.735
## + TS.       1      0.151 280.93 -73.705
## + DRB.      1      0.106 280.97 -73.642
## + dws_adj   1      0.099 280.98 -73.633
## + X3PAr     1      0.082 281.00 -73.609
## + FTr       1      0.071 281.01 -73.594
## + ftr_adj   1      0.052 281.03 -73.569
## + TOV.      1      0.025 281.05 -73.531
## + GS        1      0.008 281.07 -73.508
## - DBPM      1      9.830 290.91 -72.170
## - USG.      1     17.801 298.88 -61.762
## + Pos       6      5.519 275.56 -51.366
## - Age       1     39.226 320.31 -35.108
## - MP        1     93.538 374.62  25.195
```

```
stepaic_model <- stepAIC(object = null, scope = list(lower = null, upper = full),
direction = "both", k = 2)
```

```
## Start: AIC=143.77
```

```
## logsal ~ 1
```

```
##
```

	Df	Sum of Sq	RSS	AIC
## + MP	1	205.936	350.46	-32.187
## + PTS	1	204.939	351.46	-31.093
## + dws_adj	1	177.276	379.12	-1.924
## + DWS	1	155.441	400.96	19.635
## + GS	1	150.239	406.16	24.598
## + gs_adj	1	148.593	407.80	26.155
## + ows_adj	1	137.559	418.84	36.434
## + G	1	134.283	422.11	39.433
## + OWS	1	132.960	423.44	40.638
## + OBPM	1	126.131	430.27	46.797
## + VORP	1	116.845	439.55	55.018
## + vorp_adj	1	103.261	453.14	66.736
## + PER	1	96.356	460.04	72.559
## + WS.48	1	65.572	490.83	97.496
## + USG.	1	55.407	500.99	105.388
## + AST.	1	43.172	513.23	114.677
## + DBPM	1	40.236	516.16	116.873
## + ORtg	1	38.938	517.46	117.840
## + Age	1	33.751	522.65	121.680
## + Conference	2	33.141	523.26	124.130
## + TS.	1	28.177	528.22	125.765
## + DRtg	1	13.737	542.66	136.148
## + DRB.	1	10.839	545.56	138.198
## + stl_adj	1	8.592	547.81	139.781
## + TRB.	1	6.763	549.64	141.064
## + orb_adj	1	5.968	550.43	141.621
## + blk_adj	1	5.623	550.77	141.862
## + X3PAr	1	3.600	552.80	143.273
## + International	1	2.977	553.42	143.707



```

## <none> 556.40 143.772
## + Height 1 2.359 554.04 144.136
## + TOV. 1 2.173 554.22 144.266
## + STL. 1 1.585 554.81 144.674
## + ftr_adj 1 1.264 555.13 144.897
## + Pos 6 15.293 541.10 145.042
## + ORB. 1 0.747 555.65 145.255
## + BLK. 1 0.669 555.73 145.309
## + FTr 1 0.451 555.95 145.460
##
## Step: AIC=-32.19
## logsal ~ MP
##
## Df Sum of Sq RSS AIC
## + Age 1 31.599 318.86 -66.566
## + PER 1 11.787 338.67 -43.358
## + PTS 1 10.016 340.45 -41.350
## + OBPM 1 8.947 341.51 -40.144
## + Conference 2 9.952 340.51 -39.278
## + DBPM 1 7.922 342.54 -38.990
## + ows_adj 1 7.724 342.74 -38.767
## + OWS 1 7.552 342.91 -38.574
## + USG. 1 7.500 342.96 -38.515
## + WS.48 1 7.398 343.06 -38.401
## + dws_adj 1 7.237 343.23 -38.220
## + DRtg 1 6.013 344.45 -36.850
## + Height 1 5.945 344.52 -36.773
## + orb_adj 1 5.930 344.53 -36.758
## + TRB. 1 5.716 344.75 -36.518
## + AST. 1 5.664 344.80 -36.460
## + VORP 1 5.647 344.82 -36.441
## + DRB. 1 5.362 345.10 -36.123
## + DWS 1 4.623 345.84 -35.300
## + vorp_adj 1 4.560 345.90 -35.230
## + Pos 6 13.359 337.10 -35.150
## + ORB. 1 3.829 346.63 -34.416
## + X3PAR 1 3.805 346.66 -34.390
## + ORtg 1 2.919 347.54 -33.407
## + blk_adj 1 2.426 348.04 -32.861
## + gs_adj 1 2.122 348.34 -32.525
## <none> 350.46 -32.187
## + International 1 1.745 348.72 -32.109
## + G 1 1.657 348.81 -32.011
## + BLK. 1 1.508 348.95 -31.847
## + GS 1 1.217 349.24 -31.526
## + ftr_adj 1 0.799 349.66 -31.066
## + TS. 1 0.672 349.79 -30.926
## + FTr 1 0.618 349.84 -30.867
## + TOV. 1 0.051 350.41 -30.243
## + stl_adj 1 0.037 350.42 -30.228
## + STL. 1 0.014 350.45 -30.202
## - MP 1 205.936 556.40 143.772
##
## Step: AIC=-66.57

```

```

## logsal ~ MP + Age
##
##
##      Df Sum of Sq  RSS    AIC
## + Conference      2    16.682 302.18 -83.254
## + PTS              1    11.385 307.48 -78.564
## + USG.             1    10.980 307.88 -78.056
## + PER              1     9.861 309.00 -76.660
## + orb_adj          1     7.474 311.39 -73.697
## + Height           1     6.376 312.49 -72.342
## + TRB.             1     6.304 312.56 -72.253
## + DBPM             1     5.690 313.17 -71.498
## + DRB.             1     5.453 313.41 -71.207
## + OWS              1     5.322 313.54 -71.046
## + ows_adj          1     5.162 313.70 -70.850
## + ORB.             1     5.111 313.75 -70.787
## + dws_adj          1     4.642 314.22 -70.212
## + DRtg            1     4.605 314.26 -70.166
## + X3PAr           1     4.420 314.44 -69.940
## + OBPM            1     4.154 314.71 -69.614
## + Pos             6    12.036 306.83 -69.379
## + VORP            1     3.468 315.40 -68.776
## + WS.48           1     3.223 315.64 -68.476
## + blk_adj         1     3.153 315.71 -68.392
## + AST.            1     3.140 315.72 -68.376
## + DWS             1     3.024 315.84 -68.234
## + G               1     2.245 316.62 -67.286
## + BLK.            1     2.202 316.66 -67.234
## + vorp_adj        1     1.725 317.14 -66.654
## <none>                318.86 -66.566
## + gs_adj          1     1.590 317.27 -66.490
## + International    1     1.579 317.28 -66.478
## + ftr_adj         1     1.258 317.61 -66.087
## + FTr            1     1.021 317.84 -65.801
## + GS             1     0.709 318.15 -65.422
## + ORtg           1     0.486 318.38 -65.153
## + stl_adj         1     0.273 318.59 -64.896
## + STL.           1     0.113 318.75 -64.702
## + TOV.           1     0.028 318.84 -64.599
## + TS.            1     0.000 318.86 -64.566
## - Age            1    31.599 350.46 -32.187
## - MP             1   203.784 522.65 121.680
##
## Step:  AIC=-83.25
## logsal ~ MP + Age + Conference
##
##
##      Df Sum of Sq  RSS    AIC
## + USG.             1    11.271 290.91 -95.889
## + PTS              1    11.175 291.01 -95.762
## + PER              1    10.001 292.18 -94.212
## + orb_adj          1     6.275 295.91 -89.334
## + OWS              1     5.042 297.14 -87.732
## + OBPM            1     4.879 297.30 -87.521
## + ows_adj          1     4.828 297.35 -87.455
## + TRB.            1     4.595 297.59 -87.154

```

```

## + Height      1      4.391 297.79 -86.889
## + ORB.        1      4.116 298.06 -86.534
## + X3PAr       1      4.033 298.15 -86.427
## + AST.        1      3.904 298.28 -86.261
## + DRB.        1      3.730 298.45 -86.036
## + DBPM        1      3.300 298.88 -85.482
## + WS.48       1      2.974 299.21 -85.061
## + dws_adj     1      2.808 299.37 -84.849
## + VORP        1      2.567 299.61 -84.539
## + DRtg        1      2.501 299.68 -84.454
## + gs_adj      1      2.470 299.71 -84.413
## + Pos         6      9.929 292.25 -84.117
## + G           1      2.230 299.95 -84.106
## + ftr_adj     1      1.755 300.43 -83.496
## + blk_adj     1      1.752 300.43 -83.493
## + DWS         1      1.615 300.57 -83.317
## <none>                302.18 -83.254
## + FTr         1      1.465 300.72 -83.125
## + BLK.        1      1.097 301.08 -82.655
## + GS          1      0.904 301.28 -82.408
## + vorp_adj    1      0.805 301.38 -82.281
## + ORtg        1      0.703 301.48 -82.151
## + International 1      0.541 301.64 -81.944
## + stl_adj     1      0.480 301.70 -81.867
## + STL.        1      0.206 301.97 -81.517
## + TOV.        1      0.070 302.11 -81.343
## + TS.         1      0.054 302.13 -81.323
## - Conference   2     16.682 318.86 -66.566
## - Age         1     38.329 340.51 -39.278
## - MP          1    176.059 478.24  91.494
##
## Step:  AIC=-95.89
## logsal ~ MP + Age + Conference + USG.
##
##           Df Sum of Sq  RSS      AIC
## + DBPM      1      9.830 281.08 -107.123
## + orb_adj   1      9.488 281.42 -106.655
## + Height    1      6.623 284.29 -102.755
## + ORB.      1      6.039 284.87 -101.965
## + TRB.      1      5.405 285.50 -101.110
## + Pos       6     11.647 279.26 -99.620
## + dws_adj   1      3.686 287.22 -98.798
## + DRB.      1      3.680 287.23 -98.790
## + blk_adj   1      3.270 287.64 -98.242
## + PER       1      3.148 287.76 -98.078
## + X3PAr     1      2.896 288.01 -97.740
## + gs_adj    1      2.744 288.17 -97.538
## + DRtg      1      2.668 288.24 -97.436
## + WS.48     1      2.627 288.28 -97.381
## + ows_adj   1      2.068 288.84 -96.635
## + OWS       1      2.002 288.91 -96.548
## + BLK.      1      1.972 288.94 -96.508
## + OBPM      1      1.647 289.26 -96.075
## + ORtg      1      1.586 289.32 -95.994

```

```

## <none>                290.91 -95.889
## + DWS                  1      1.454 289.46 -95.818
## + PTS                  1      1.253 289.66 -95.551
## + ftr_adj              1      0.913 290.00 -95.100
## + FTr                  1      0.760 290.15 -94.897
## + VORP                 1      0.739 290.17 -94.869
## + International        1      0.597 290.31 -94.680
## + stl_adj              1      0.538 290.37 -94.602
## + vorp_adj             1      0.412 290.50 -94.435
## + AST.                 1      0.395 290.51 -94.413
## + GS                   1      0.381 290.53 -94.394
## + TOV.                 1      0.292 290.62 -94.276
## + TS.                  1      0.183 290.73 -94.131
## + G                    1      0.085 290.82 -94.002
## + STL.                 1      0.065 290.84 -93.975
## - USG.                 1     11.271 302.18 -83.254
## - Conference           2     16.974 307.88 -78.056
## - Age                  1     42.217 333.13 -45.717
## - MP                   1    129.044 419.95  43.457
##
## Step: AIC=-107.12
## logsal ~ MP + Age + Conference + USG. + DBPM
##
##           Df Sum of Sq  RSS      AIC
## + orb_adj    1      3.238 277.84 -109.584
## + Height     1      2.374 278.71 -108.389
## + DRtg       1      2.280 278.80 -108.258
## + OBPM       1      2.055 279.02 -107.949
## + ORB.       1      1.616 279.46 -107.344
## <none>                281.08 -107.123
## + ORtg       1      1.287 279.79 -106.890
## + gs_adj     1      1.262 279.82 -106.855
## + STL.       1      1.247 279.83 -106.835
## + ows_adj    1      1.033 280.05 -106.541
## + DWS        1      1.005 280.07 -106.503
## + OWS        1      0.979 280.10 -106.467
## + vorp_adj   1      0.852 280.23 -106.292
## + PTS        1      0.819 280.26 -106.247
## + TRB.       1      0.657 280.42 -106.024
## + BLK.       1      0.620 280.46 -105.973
## + WS.48      1      0.518 280.56 -105.833
## + International 1      0.514 280.57 -105.828
## + PER        1      0.490 280.59 -105.795
## + stl_adj    1      0.398 280.68 -105.668
## + VORP       1      0.324 280.76 -105.567
## + G          1      0.247 280.83 -105.461
## + blk_adj    1      0.182 280.90 -105.373
## + AST.       1      0.174 280.91 -105.361
## + TS.        1      0.151 280.93 -105.330
## + DRB.       1      0.106 280.97 -105.268
## + dws_adj    1      0.099 280.98 -105.259
## + X3PAr      1      0.082 281.00 -105.235
## + FTr        1      0.071 281.01 -105.220
## + ftr_adj    1      0.052 281.03 -105.195

```

```

## + TOV.          1      0.025 281.05 -105.157
## + GS            1      0.008 281.07 -105.134
## + Pos           6      5.519 275.56 -102.758
## - DBPM          1      9.830 290.91 -95.889
## - Conference    2     13.017 294.10 -93.695
## - USG.          1     17.801 298.88 -85.482
## - Age           1     39.226 320.31 -58.828
## - MP            1     93.538 374.62   1.475
##
## Step:  AIC=-109.58
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj
##
##              Df Sum of Sq  RSS      AIC
## + BLK.        1      2.920 274.92 -111.652
## + blk_adj     1      2.638 275.20 -111.257
## + DRtg        1      2.508 275.33 -111.075
## + OBPM        1      2.066 275.78 -110.458
## + AST.        1      1.870 275.97 -110.184
## <none>                277.84 -109.584
## + ORB.        1      1.386 276.46 -109.509
## + TRB.        1      1.371 276.47 -109.489
## + DWS         1      1.349 276.49 -109.458
## + gs_adj      1      1.107 276.73 -109.121
## + DRB.        1      0.945 276.90 -108.896
## + X3PAr       1      0.915 276.93 -108.854
## + vorp_adj    1      0.880 276.96 -108.806
## + PTS         1      0.612 277.23 -108.433
## + G           1      0.554 277.29 -108.352
## + OWS         1      0.532 277.31 -108.321
## + ows_adj     1      0.517 277.32 -108.302
## + FTr         1      0.371 277.47 -108.098
## + ftr_adj     1      0.366 277.48 -108.092
## + ORtg        1      0.328 277.51 -108.038
## + Height      1      0.316 277.53 -108.022
## + dws_adj     1      0.276 277.57 -107.967
## + VORP        1      0.262 277.58 -107.948
## + International 1      0.229 277.61 -107.901
## + STL.        1      0.082 277.76 -107.697
## + stl_adj     1      0.057 277.78 -107.663
## + TOV.        1      0.051 277.79 -107.656
## + WS.48       1      0.029 277.81 -107.624
## + TS.         1      0.004 277.84 -107.590
## + GS          1      0.001 277.84 -107.586
## + PER         1      0.000 277.84 -107.585
## - orb_adj     1      3.238 281.08 -107.123
## - DBPM        1      3.580 281.42 -106.655
## + Pos         6      2.381 275.46 -100.898
## - Conference   2     13.274 291.12 -95.616
## - USG.         1     17.635 295.48 -87.892
## - Age          1     41.275 319.12 -58.260
## - MP           1     96.561 374.40   3.254
##
## Step:  AIC=-111.65
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK.

```

```

##
##           Df Sum of Sq    RSS      AIC
## + DRtg      1      2.856 272.07 -113.672
## + DWS        1      1.782 273.14 -112.155
## + OBPM        1      1.563 273.36 -111.847
## <none>                274.92 -111.652
## + STL.        1      1.238 273.68 -111.389
## + gs_adj      1      1.170 273.75 -111.294
## + TRB.        1      1.146 273.78 -111.259
## + vorp_adj    1      1.138 273.78 -111.249
## + Height      1      1.010 273.91 -111.069
## + DRB.        1      0.969 273.95 -111.011
## + AST.        1      0.786 274.14 -110.754
## + PTS         1      0.692 274.23 -110.622
## + ORB.        1      0.650 274.27 -110.563
## + G           1      0.604 274.32 -110.498
## + ORtg        1      0.603 274.32 -110.498
## + dws_adj     1      0.560 274.36 -110.436
## + X3PAr       1      0.551 274.37 -110.424
## + ows_adj     1      0.502 274.42 -110.356
## + OWS         1      0.492 274.43 -110.341
## + VORP        1      0.474 274.45 -110.316
## + International 1      0.360 274.56 -110.156
## + stl_adj     1      0.331 274.59 -110.115
## + ftr_adj     1      0.237 274.68 -109.984
## + FTr         1      0.228 274.69 -109.971
## + TS.         1      0.155 274.77 -109.869
## + blk_adj     1      0.099 274.82 -109.790
## + PER         1      0.078 274.84 -109.761
## + WS.48       1      0.067 274.85 -109.746
## + GS          1      0.003 274.92 -109.656
## + TOV.        1      0.001 274.92 -109.652
## - BLK.        1      2.920 277.84 -109.584
## - orb_adj     1      5.538 280.46 -105.973
## + Pos         6      4.241 270.68 -105.637
## - DBPM        1      6.231 281.15 -105.024
## - Conference   2     13.578 288.50 -97.091
## - USG.        1     19.547 294.47 -87.208
## - Age         1     39.589 314.51 -61.857
## - MP          1     82.811 357.73 -12.281
##
## Step:  AIC=-113.67
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRtg
##
##           Df Sum of Sq    RSS      AIC
## + OBPM        1      2.536 269.53 -115.278
## + ORtg        1      1.800 270.27 -114.228
## + WS.48       1      1.591 270.47 -113.931
## <none>                272.07 -113.672
## + ows_adj     1      1.079 270.99 -113.202
## + OWS         1      1.017 271.05 -113.114
## + Height      1      0.993 271.07 -113.080
## + PER         1      0.863 271.20 -112.896

```

```

## + X3PAr      1      0.845 271.22 -112.870
## + STL.       1      0.808 271.26 -112.817
## + TS.        1      0.773 271.29 -112.768
## + PTS        1      0.769 271.30 -112.762
## + International 1      0.611 271.45 -112.538
## + gs_adj     1      0.611 271.45 -112.538
## + AST.       1      0.394 271.67 -112.230
## + vorp_adj   1      0.392 271.67 -112.227
## + dws_adj    1      0.391 271.67 -112.226
## + ftr_adj    1      0.374 271.69 -112.203
## + DRB.       1      0.321 271.74 -112.127
## + FTr        1      0.303 271.76 -112.102
## + G          1      0.290 271.78 -112.083
## + stl_adj    1      0.263 271.80 -112.044
## + TRB.       1      0.247 271.82 -112.022
## + TOV.       1      0.134 271.93 -111.862
## + VORP       1      0.126 271.94 -111.850
## + blk_adj    1      0.116 271.95 -111.837
## + DWS        1      0.084 271.98 -111.792
## + ORB.       1      0.042 272.02 -111.732
## + GS         1      0.000 272.06 -111.673
## - DRtg       1      2.856 274.92 -111.652
## - BLK.       1      3.268 275.33 -111.075
## + Pos        6      4.732 267.33 -108.427
## - orb_adj    1      6.021 278.09 -107.245
## - DBPM       1      8.677 280.74 -103.585
## - Conference  2     14.327 286.39 -97.913
## - USG.       1     22.348 294.41 -85.280
## - Age        1     40.455 312.52 -62.301
## - MP         1     64.976 337.04 -33.219
##
## Step:  AIC=-115.28
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRtg + OBPM
##
##           Df Sum of Sq  RSS      AIC
## + vorp_adj  1      2.994 266.54 -117.579
## + VORP      1      2.081 267.45 -116.262
## + Height    1      1.421 268.11 -115.313
## <none>                      269.53 -115.278
## + STL.      1      1.007 268.52 -114.719
## + PER       1      0.711 268.82 -114.296
## + International 1      0.682 268.85 -114.254
## + ftr_adj   1      0.598 268.93 -114.134
## + gs_adj    1      0.584 268.94 -114.113
## + FTr       1      0.495 269.03 -113.986
## + stl_adj   1      0.440 269.09 -113.908
## + dws_adj   1      0.396 269.13 -113.845
## + X3PAr     1      0.327 269.20 -113.746
## - OBPM      1      2.536 272.06 -113.672
## + WS.48     1      0.213 269.32 -113.582
## + TS.       1      0.193 269.34 -113.554
## + G         1      0.185 269.35 -113.542
## - BLK.      1      2.660 272.19 -113.497

```

```

## + DRB.          1      0.126 269.40 -113.458
## + AST.          1      0.097 269.43 -113.416
## + TRB.          1      0.081 269.45 -113.394
## + DWS           1      0.063 269.47 -113.368
## + blk_adj       1      0.058 269.47 -113.361
## + PTS           1      0.050 269.48 -113.350
## + TOV.          1      0.023 269.51 -113.311
## + ows_adj       1      0.014 269.51 -113.299
## + OWS           1      0.009 269.52 -113.291
## + ORB.          1      0.008 269.52 -113.290
## + GS            1      0.003 269.53 -113.283
## + ORtg          1      0.001 269.53 -113.280
## - DRtg          1      3.829 273.36 -111.847
## + Pos           6      5.488 264.04 -111.199
## - orb_adj       1      5.737 275.27 -109.169
## - DBPM          1      9.708 279.24 -103.655
## - Conference    2     14.888 284.42 -98.579
## - USG.          1     18.840 288.37 -91.266
## - MP            1     35.120 304.65 -70.122
## - Age           1     35.311 304.84 -69.880
##
## Step:  AIC=-117.58
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRtg + OBPM + vorp_adj
##
##           Df Sum of Sq  RSS      AIC
## + G         1      1.996 264.54 -118.473
## + ows_adj    1      1.693 264.84 -118.031
## + Height     1      1.409 265.13 -117.620
## <none>                266.54 -117.579
## + OWS        1      1.371 265.17 -117.564
## + PER        1      0.984 265.55 -117.003
## + dws_adj    1      0.984 265.55 -117.003
## + STL.       1      0.915 265.62 -116.902
## + gs_adj     1      0.594 265.94 -116.437
## + International 1      0.590 265.94 -116.432
## + WS.48      1      0.541 265.99 -116.361
## + ftr_adj    1      0.485 266.05 -116.279
## + X3PAr      1      0.464 266.07 -116.249
## + stl_adj    1      0.408 266.13 -116.168
## - DRtg       1      2.398 268.93 -116.131
## + TS.        1      0.380 266.15 -116.128
## + FTr        1      0.378 266.16 -116.125
## + PTS        1      0.356 266.18 -116.093
## + GS         1      0.248 266.29 -115.937
## + DWS        1      0.192 266.34 -115.856
## + AST.       1      0.166 266.37 -115.819
## + DRB.       1      0.148 266.39 -115.792
## + TOV.       1      0.141 266.39 -115.783
## + ORtg       1      0.109 266.43 -115.736
## - BLK.       1      2.685 269.22 -115.720
## + blk_adj    1      0.092 266.44 -115.712
## + VORP       1      0.091 266.44 -115.711
## + TRB.       1      0.069 266.47 -115.678

```



```

## + ORB.          1      0.004 266.53 -115.584
## - vorp_adj      1      2.994 269.53 -115.278
## + Pos           6      5.914 260.62 -114.218
## - OBPM          1      5.138 271.67 -112.227
## - orb_adj       1      5.774 272.31 -111.327
## - DBPM          1     11.498 278.03 -103.319
## - Conference    2     15.545 282.08 -99.755
## - USG.          1     19.472 286.01 -92.432
## - Age           1     36.241 302.78 -70.495
## - MP            1     37.906 304.44 -68.384
##
## Step:  AIC=-118.47
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRTg + OBPM + vorp_adj + G
##
##           Df Sum of Sq  RSS      AIC
## + dws_adj      1      2.688 261.85 -120.404
## + ows_adj      1      1.977 262.56 -119.361
## + OWS          1      1.541 263.00 -118.722
## - DRTg         1      1.210 265.75 -118.716
## + PER          1      1.523 263.02 -118.695
## <none>                264.54 -118.473
## + STL.         1      1.347 263.19 -118.438
## + Height       1      1.238 263.30 -118.279
## + ftr_adj      1      0.828 263.71 -117.679
## + X3PAr        1      0.808 263.73 -117.651
## - G            1      1.996 266.54 -117.579
## + FTr          1      0.709 263.83 -117.506
## + International 1      0.663 263.88 -117.439
## + WS.48        1      0.547 263.99 -117.269
## + stl_adj      1      0.457 264.08 -117.138
## + TS.          1      0.314 264.23 -116.930
## + DWS          1      0.265 264.27 -116.858
## + VORP         1      0.236 264.30 -116.816
## + DRB.         1      0.235 264.31 -116.814
## + PTS          1      0.226 264.31 -116.802
## + TOV.         1      0.192 264.35 -116.752
## + gs_adj       1      0.179 264.36 -116.733
## + AST.         1      0.164 264.38 -116.712
## + ORtg         1      0.151 264.39 -116.692
## + TRB.         1      0.149 264.39 -116.689
## + blk_adj      1      0.013 264.53 -116.492
## + GS           1      0.007 264.53 -116.483
## + ORB.         1      0.007 264.53 -116.483
## - BLK.         1      2.788 267.33 -116.436
## + Pos          6      5.740 258.80 -114.918
## - vorp_adj     1      4.805 269.35 -113.542
## - OBPM         1      6.321 270.86 -111.382
## - orb_adj      1      6.657 271.20 -110.905
## - DBPM         1     11.301 275.84 -104.367
## - USG.         1     13.107 277.65 -101.855
## - Conference    2     15.461 280.00 -100.604
## - MP           1     19.531 284.07 -93.048
## - Age          1     36.875 301.41 -70.232

```

```

##
## Step: AIC=-120.4
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRtg + OBPM + vorp_adj + G + dws_adj
##
##           Df Sum of Sq    RSS      AIC
## + ows_adj      1      2.833 259.02 -122.593
## + OWS          1      2.176 259.68 -121.616
## + PER          1      1.594 260.26 -120.755
## + DWS          1      1.396 260.45 -120.463
## <none>                261.85 -120.404
## + Height      1      0.892 260.96 -119.718
## + WS.48       1      0.795 261.06 -119.575
## + DRB.        1      0.685 261.17 -119.413
## + X3PAr       1      0.673 261.18 -119.395
## - BLK.        1      2.134 263.99 -119.280
## + International 1      0.584 261.27 -119.263
## + PTS         1      0.463 261.39 -119.086
## + ftr_adj     1      0.441 261.41 -119.053
## + TRB.        1      0.435 261.42 -119.044
## + VORP        1      0.422 261.43 -119.025
## + STL.        1      0.415 261.44 -119.015
## + TS.         1      0.414 261.44 -119.013
## + FTr         1      0.333 261.52 -118.895
## + blk_adj     1      0.291 261.56 -118.833
## + TOV.        1      0.189 261.66 -118.682
## + AST.        1      0.167 261.69 -118.649
## + ORtg        1      0.155 261.70 -118.632
## + stl_adj     1      0.120 261.73 -118.580
## - dws_adj     1      2.688 264.54 -118.473
## + GS          1      0.026 261.82 -118.443
## + ORB.        1      0.011 261.84 -118.420
## + gs_adj      1      0.008 261.84 -118.416
## - DRtg        1      3.616 265.47 -117.125
## - G           1      3.699 265.55 -117.003
## + Pos         6      4.795 257.06 -115.520
## - orb_adj     1      5.608 267.46 -114.246
## - vorp_adj    1      6.933 268.79 -112.343
## - MP          1      7.652 269.50 -111.314
## - OBPM        1      7.770 269.62 -111.147
## - DBPM        1     11.655 273.51 -105.638
## - USG.        1     12.479 274.33 -104.480
## - Conference   2     15.452 277.30 -102.331
## - Age         1     35.154 297.01  -73.904
##
## Step: AIC=-122.59
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRtg + OBPM + vorp_adj + G + dws_adj + ows_adj
##
##           Df Sum of Sq    RSS      AIC
## + VORP        1      3.181 255.84 -125.349
## + WS.48       1      2.591 256.43 -124.463
## + PER         1      2.501 256.52 -124.328
## + DWS         1      2.310 256.71 -124.042

```

```

## + OWS          1      1.640 257.38 -123.038
## + X3PAr        1      1.468 257.55 -122.781
## <none>          259.02 -122.593
## + ftr_adj      1      1.289 257.73 -122.514
## + FTr          1      1.053 257.97 -122.161
## + DRB.         1      0.853 258.17 -121.863
## + Height       1      0.769 258.25 -121.738
## + TRB.         1      0.677 258.34 -121.601
## + TS.          1      0.563 258.45 -121.431
## + International 1      0.476 258.54 -121.300
## + ORtg         1      0.394 258.62 -121.179
## + blk_adj      1      0.277 258.74 -121.004
## + AST.         1      0.190 258.83 -120.875
## + STL.         1      0.149 258.87 -120.814
## + TOV.         1      0.148 258.87 -120.813
## - BLK.         1      2.560 261.58 -120.806
## + PTS          1      0.056 258.96 -120.676
## + GS           1      0.042 258.98 -120.655
## + gs_adj       1      0.036 258.98 -120.645
## + ORB.         1      0.008 259.01 -120.605
## + stl_adj      1      0.002 259.02 -120.596
## - ows_adj      1      2.833 261.85 -120.404
## - dws_adj      1      3.544 262.56 -119.361
## - orb_adj      1      3.982 263.00 -118.719
## - DRtg         1      4.019 263.04 -118.665
## - OBPM         1      4.411 263.43 -118.091
## - G            1      4.494 263.51 -117.970
## + Pos          6      4.228 254.79 -116.929
## - MP           1      5.985 265.00 -115.798
## - vorp_adj     1      9.766 268.78 -110.343
## - USG.         1     11.149 270.17 -108.367
## - DBPM         1     13.454 272.47 -105.098
## - Conference   2     15.647 274.67 -104.011
## - Age          1     35.468 294.49  -75.184
##
## Step:  AIC=-125.35
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRtg + OBPM + vorp_adj + G + dws_adj + ows_adj + VORP
##
##           Df Sum of Sq    RSS      AIC
## + WS.48    1      5.423 250.41 -131.599
## + PER       1      4.586 251.25 -130.313
## + X3PAr     1      3.092 252.75 -128.030
## + ORtg      1      2.165 253.67 -126.622
## + ftr_adj   1      2.069 253.77 -126.475
## + FTr       1      1.707 254.13 -125.926
## + TS.       1      1.623 254.22 -125.799
## <none>      255.84 -125.349
## + DRB.      1      0.908 254.93 -124.718
## + TRB.      1      0.751 255.09 -124.481
## + AST.      1      0.597 255.24 -124.249
## + Height    1      0.551 255.29 -124.179
## + TOV.      1      0.518 255.32 -124.129
## + DWS       1      0.453 255.38 -124.032

```

```

## + International 1      0.381 255.46 -123.923
## + blk_adj      1      0.357 255.48 -123.887
## + STL.         1      0.081 255.76 -123.472
## + ORB.         1      0.047 255.79 -123.420
## + PTS          1      0.038 255.80 -123.407
## + OWS          1      0.012 255.83 -123.367
## + gs_adj       1      0.010 255.83 -123.364
## + stl_adj      1      0.002 255.84 -123.353
## + GS           1      0.001 255.84 -123.352
## - orb_adj      1      2.920 258.76 -122.980
## - BLK.         1      3.152 258.99 -122.635
## - VORP         1      3.181 259.02 -122.593
## - DRtg         1      4.857 260.69 -120.109
## - dws_adj      1      4.875 260.71 -120.083
## - vorp_adj     1      4.938 260.77 -119.990
## - OBPM         1      5.235 261.07 -119.550
## - ows_adj      1      5.592 261.43 -119.025
## - MP           1      5.740 261.58 -118.807
## + Pos          6      3.572 252.27 -118.763
## - G            1      6.239 262.08 -118.073
## - USG.         1     13.195 269.03 -107.987
## - Conference   2     15.224 271.06 -107.096
## - DBPM         1     16.271 272.11 -103.610
## - Age          1     33.446 289.28  -80.046
##
## Step:  AIC=-131.6
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##      DRtg + OBPM + vorp_adj + G + dws_adj + ows_adj + VORP + WS.48
##
##           Df Sum of Sq    RSS      AIC
## - DRtg      1      0.289 250.70 -133.154
## - BLK.      1      0.406 250.82 -132.975
## <none>                250.41 -131.599
## + Height    1      0.928 249.49 -131.027
## + AST.      1      0.852 249.56 -130.911
## + STL.      1      0.825 249.59 -130.870
## + ftr_adj   1      0.604 249.81 -130.528
## + PER       1      0.456 249.96 -130.300
## + FTr       1      0.443 249.97 -130.280
## + blk_adj   1      0.340 250.07 -130.121
## + stl_adj   1      0.293 250.12 -130.049
## + X3PAr     1      0.220 250.19 -129.936
## + International 1      0.183 250.23 -129.880
## + TOV.      1      0.180 250.23 -129.876
## + DWS       1      0.174 250.24 -129.866
## + ORtg      1      0.131 250.28 -129.800
## + DRB.      1      0.069 250.34 -129.705
## + TRB.      1      0.049 250.37 -129.674
## + ORB.      1      0.044 250.37 -129.667
## + OWS       1      0.043 250.37 -129.665
## + PTS       1      0.041 250.37 -129.662
## + TS.       1      0.029 250.38 -129.644
## + GS        1      0.004 250.41 -129.604
## + gs_adj    1      0.003 250.41 -129.603

```

```

## - USG.          1      3.237 253.65 -128.654
## - MP            1      4.046 254.46 -127.428
## + Pos          6      4.714 245.70 -126.915
## - WS.48        1      5.423 255.84 -125.349
## - VORP         1      6.013 256.43 -124.463
## - orb_adj      1      6.698 257.11 -123.437
## - vorp_adj     1      7.119 257.53 -122.807
## - dws_adj      1      7.188 257.60 -122.702
## - G            1      8.215 258.63 -121.172
## - DBPM         1      8.642 259.06 -120.536
## - OBPM         1      9.687 260.10 -118.986
## - ows_adj      1     10.126 260.54 -118.337
## - Conference   2     14.287 264.70 -114.236
## - Age          1     35.321 285.74  -82.798
##
## Step:  AIC=-133.15
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + BLK. +
##         OBPM + vorp_adj + G + dws_adj + ows_adj + VORP + WS.48
##
##           Df Sum of Sq  RSS      AIC
## - BLK.      1      0.289 250.99 -134.710
## <none>                250.70 -133.154
## + STL.      1      1.103 249.60 -132.852
## + Height    1      1.023 249.68 -132.729
## + AST.      1      0.979 249.72 -132.661
## + ftr_adj   1      0.472 250.23 -131.880
## + stl_adj   1      0.448 250.26 -131.843
## + FTr       1      0.359 250.34 -131.706
## + PER       1      0.297 250.41 -131.611
## + DRtg      1      0.289 250.41 -131.599
## + ORtg      1      0.273 250.43 -131.574
## + DWS       1      0.238 250.47 -131.520
## + blk_adj   1      0.237 250.47 -131.519
## + TOV.      1      0.193 250.51 -131.450
## + International 1      0.144 250.56 -131.376
## + ORB.      1      0.125 250.58 -131.347
## + OWS       1      0.059 250.64 -131.245
## + TRB.      1      0.051 250.65 -131.232
## + X3Par     1      0.048 250.66 -131.228
## + DRB.      1      0.044 250.66 -131.222
## + PTS       1      0.039 250.66 -131.214
## + gs_adj    1      0.022 250.68 -131.188
## + GS        1      0.003 250.70 -131.159
## + TS.       1      0.002 250.70 -131.158
## - USG.      1      3.113 253.82 -130.403
## + Pos       6      4.910 245.79 -128.769
## - MP        1      6.224 256.93 -125.712
## - VORP      1      6.302 257.00 -125.597
## - dws_adj   1      7.257 257.96 -124.168
## - vorp_adj  1      7.582 258.29 -123.684
## - G         1      8.308 259.01 -122.603
## - orb_adj   1      8.548 259.25 -122.246
## - WS.48     1      9.991 260.69 -120.109
## - DBPM      1     10.696 261.40 -119.069

```

```

## - ows_adj      1      11.082 261.79 -118.502
## - Conference   2      14.106 264.81 -116.079
## - OBPM         1      14.273 264.98 -113.837
## - Age          1      36.316 287.02 -83.071
##
## Step:  AIC=-134.71
## logsal ~ MP + Age + Conference + USG. + DBPM + orb_adj + OBPM +
##        vorp_adj + G + dws_adj + ows_adj + VORP + WS.48
##
##              Df Sum of Sq    RSS      AIC
## <none>                250.99 -134.710
## + AST.                1      1.201 249.79 -134.557
## + Height              1      0.787 250.21 -133.919
## + STL.                1      0.564 250.43 -133.576
## + blk_adj             1      0.511 250.48 -133.494
## + PER                 1      0.447 250.55 -133.397
## + ftr_adj             1      0.409 250.58 -133.338
## + FTr                 1      0.310 250.68 -133.185
## + BLK.                1      0.289 250.70 -133.154
## + TOV.                1      0.248 250.75 -133.091
## + DWS                 1      0.230 250.76 -133.062
## + ORB.                1      0.185 250.81 -132.994
## + ORtg                1      0.174 250.82 -132.976
## + DRtg                1      0.173 250.82 -132.975
## + stl_adj             1      0.172 250.82 -132.975
## + International      1      0.112 250.88 -132.883
## + OWS                 1      0.056 250.94 -132.797
## + TRB.                1      0.040 250.95 -132.771
## + TS.                 1      0.031 250.96 -132.758
## + PTS                 1      0.030 250.96 -132.756
## + DRB.                1      0.023 250.97 -132.746
## + X3PAR               1      0.018 250.97 -132.738
## + gs_adj              1      0.012 250.98 -132.729
## + GS                  1      0.001 250.99 -132.711
## - USG.                1      2.824 253.82 -132.403
## + Pos                 6      4.306 246.69 -129.372
## - MP                  1      5.946 256.94 -127.696
## - VORP                1      6.396 257.39 -127.023
## - vorp_adj            1      7.886 258.88 -124.800
## - orb_adj             1      8.261 259.25 -124.242
## - G                   1      8.513 259.51 -123.869
## - dws_adj             1      8.775 259.77 -123.480
## - ows_adj             1     11.347 262.34 -119.688
## - DBPM                1     11.466 262.46 -119.512
## - Conference          2     14.001 264.99 -117.811
## - WS.48               1     13.151 264.14 -117.048
## - OBPM                1     18.393 269.39 -109.483
## - Age                 1     36.726 287.72 -84.135

```

## Variance Inflation Factors

```

full = lm(logsal ~ ., data = data_regressors)
summary(full)

```

```
##
## Call:
## lm(formula = logsal ~ ., data = data_regressors)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -3.01123 -0.45112  0.01986  0.53385  1.93193
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    4.4225997   6.8296551   0.648  0.51771
## Age             0.0630723   0.0108876   5.793 1.57e-08 ***
## G              -0.0203828   0.0061556  -3.311  0.00103 **
## GS             -0.0006357   0.0044519  -0.143  0.88654
## gs_adj         0.0165965   0.0752748   0.220  0.82563
## MP             0.0005305   0.0003673   1.445  0.14951
## PER            -0.0174388   0.0784872  -0.222  0.82430
## X3PAr          0.6974562   0.6075721   1.148  0.25180
## FTr            4.1859741   3.5760217   1.171  0.24259
## ftr_adj       -6.1036319   4.9320476  -1.238  0.21674
## ORB.           -0.2008639   0.2006313  -1.001  0.31746
## orb_adj        0.2144035   0.2928215   0.732  0.46455
## DRB.           -0.2363441   0.1966500  -1.202  0.23026
## TRB.           0.4371859   0.3945849   1.108  0.26866
## AST.           0.0181086   0.0156213   1.159  0.24718
## STL.           -0.2181312   0.2047322  -1.065  0.28743
## stl_adj        0.6058089   0.5364506   1.129  0.25957
## BLK.           -0.0063714   0.1047194  -0.061  0.95152
## blk_adj       -0.2721569   0.3076517  -0.885  0.37698
## TOV.           0.0021125   0.0276936   0.076  0.93924
## USG.           0.0617779   0.0422083   1.464  0.14421
## ORtg           0.0220255   0.0249201   0.884  0.37740
## DRtg           0.0288892   0.0539888   0.535  0.59293
## OWS            -0.1233481   0.5093160  -0.242  0.80878
## ows_adj        8.4004018  11.6084572   0.724  0.46978
## DWS            -0.0896228   0.2381367  -0.376  0.70689
## dws_adj        1.2651898   0.7187115   1.760  0.07924 .
## WS.48          -4.9672150   5.4844609  -0.906  0.36574
## OBPM           0.1282551   0.1092672   1.174  0.24130
## DBPM           0.2533772   0.0860760   2.944  0.00347 **
## VORP           -0.2712728   0.1809745  -1.499  0.13481
## vorp_adj       -0.7052569   0.2948591  -2.392  0.01731 *
## PosC-F         0.2750336   0.3458740   0.795  0.42706
## PosF           -0.1731032   0.2057598  -0.841  0.40078
## PosF-C         0.0093911   0.2310966   0.041  0.96761
## PosF-G         -0.3437900   0.3114840  -1.104  0.27049
## PosG           -0.6538078   0.3138647  -2.083  0.03799 *
## PosG-F         -0.4935578   0.2866025  -1.722  0.08596 .
## Height         0.0037293   0.0313987   0.119  0.90553
## PTS            0.0001479   0.0005863   0.252  0.80099
## TS.            -0.9776647   3.2686250  -0.299  0.76504
## InternationalYes -0.0470952   0.1147774  -0.410  0.68183
## ConferenceMulti -0.6674140   0.1595178  -4.184 3.65e-05 ***
## ConferenceWest  -0.0894918   0.1003389  -0.892  0.37308
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8305 on 341 degrees of freedom
## Multiple R-squared:  0.5773, Adjusted R-squared:  0.524
## F-statistic: 10.83 on 43 and 341 DF,  p-value: < 2.2e-16
```

```
vif(full)[,3]
```

```
##      Age      G      GS      gs_adj      MP
## 1.137917 3.243957 3.139664 2.860245 7.115969
## PER      X3PAr      FTr      ftr_adj      ORB.
## 9.340467 2.810743 13.073063 13.224638 18.340182
## orb_adj      DRB.      TRB.      AST.      STL.
## 4.519097 27.029354 41.691431 3.399435 3.972902
## stl_adj      BLK.      blk_adj      TOV.      USG.
## 3.690208 4.093339 3.718703 3.134092 4.975736
## ORtg      DRtg      OWS      ows_adj      DWS
## 6.711468 5.000730 25.032131 24.153697 6.408014
## dws_adj      WS.48      OBPM      DBPM      VORP
## 7.852270 9.454555 7.055519 4.132293 6.142057
## vorp_adj      Pos      Height      PTS      TS.
## 4.199518 1.253044 2.572141 6.407896 4.792302
## International Conference
## 1.147682 1.108974
```

```
full2 = lm(logsal ~ . - WS.48 - PER - ORtg - PTS, data = data_regressors) # Sequentially removed highest
```

Added Variable Plots

Diagnostics

Leverage Points

Cook's Distances

Outliers

Model Fitting

Test for Interaction

Test for Higher Order

Model Validation

Final Model

Discussion

Conclusion