QB Position	Play Type	Yards Gained	Offensive Team	Home Team
1	0	3	Bears	1
1	1	3	Bears	1
1	0	6	Bears	1
1	1	6	Bears	1
1	0	0	Bears	1
0	1	1	Bears	1

QB.Position	Play.Type	num.plays	avg.yards	min.yards	max.yards	sd.yards
Shotgun	Pass	62	5.903	-27	34	8.79
Shotgun	Run	23	5.087	-3	18	4.358
Under Center	Pass	17	4.118	-10	22	8.609
Under Center	Run	37	2.973	-5	21	4.531

Home	Number of Plays	Pct of Plays	Average	Minimum	Maximum	SD
0	57	41.01	3.895	-5	22	5.059
1	82	58.99	5.378	-27	34	8.431

Team	Number of Plays	Pct of Plays	Average	Minimum	Maximum	SD
Bears	18	12.95	5.556	-4	25	6.446
Cardinals	19	13.67	4.474	-27	31	10.57
Cowboys	13	9.353	3.615	0	12	4.073
Giants	10	7.194	3.6	0	11	4.248
Patriots	15	10.79	5.4	-7	21	8.322
Rams	15	10.79	4	-5	22	6.579
Saints	14	10.07	5.143	-10	18	7.594
Seahawks	26	18.71	5.923	-3	34	7.944
Vikings	9	6.475	3.111	0	13	4.485

Pass | Run

Shotgun

Under Center

Yards Gained
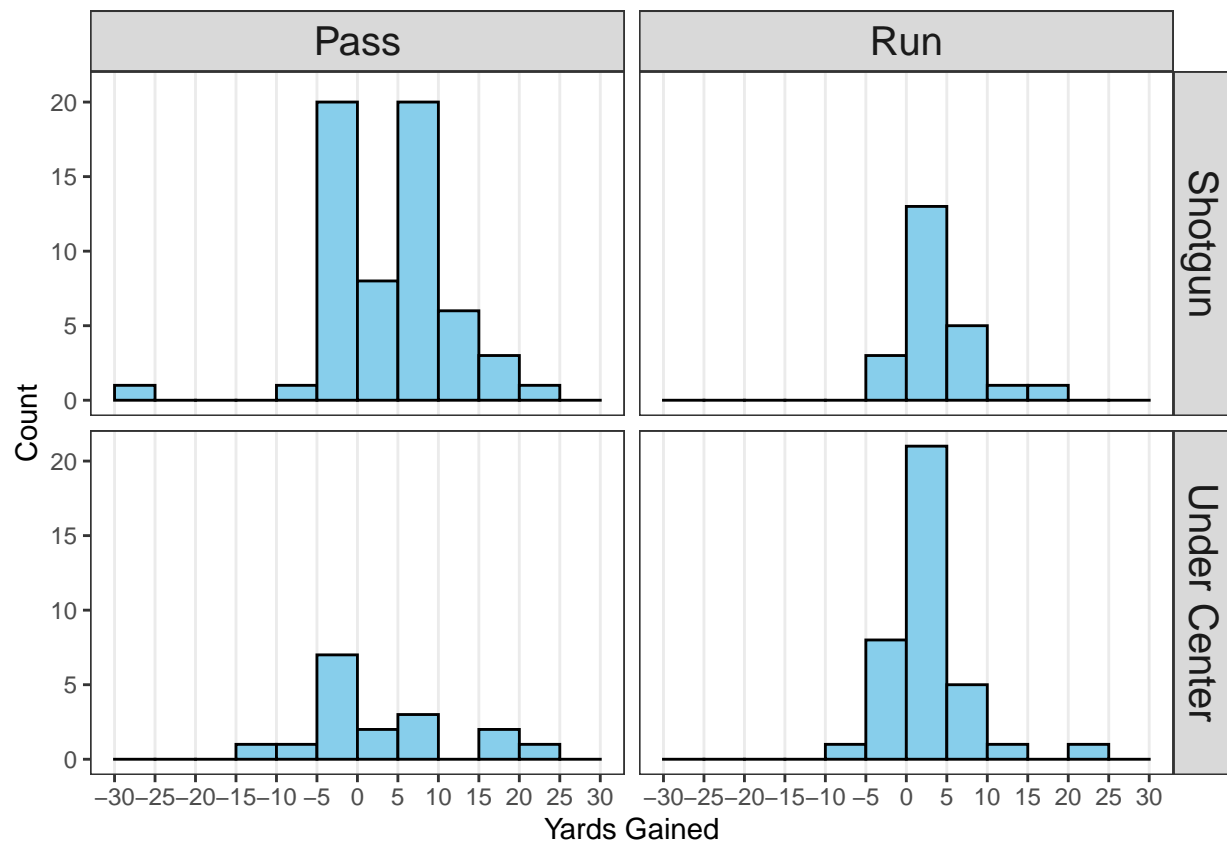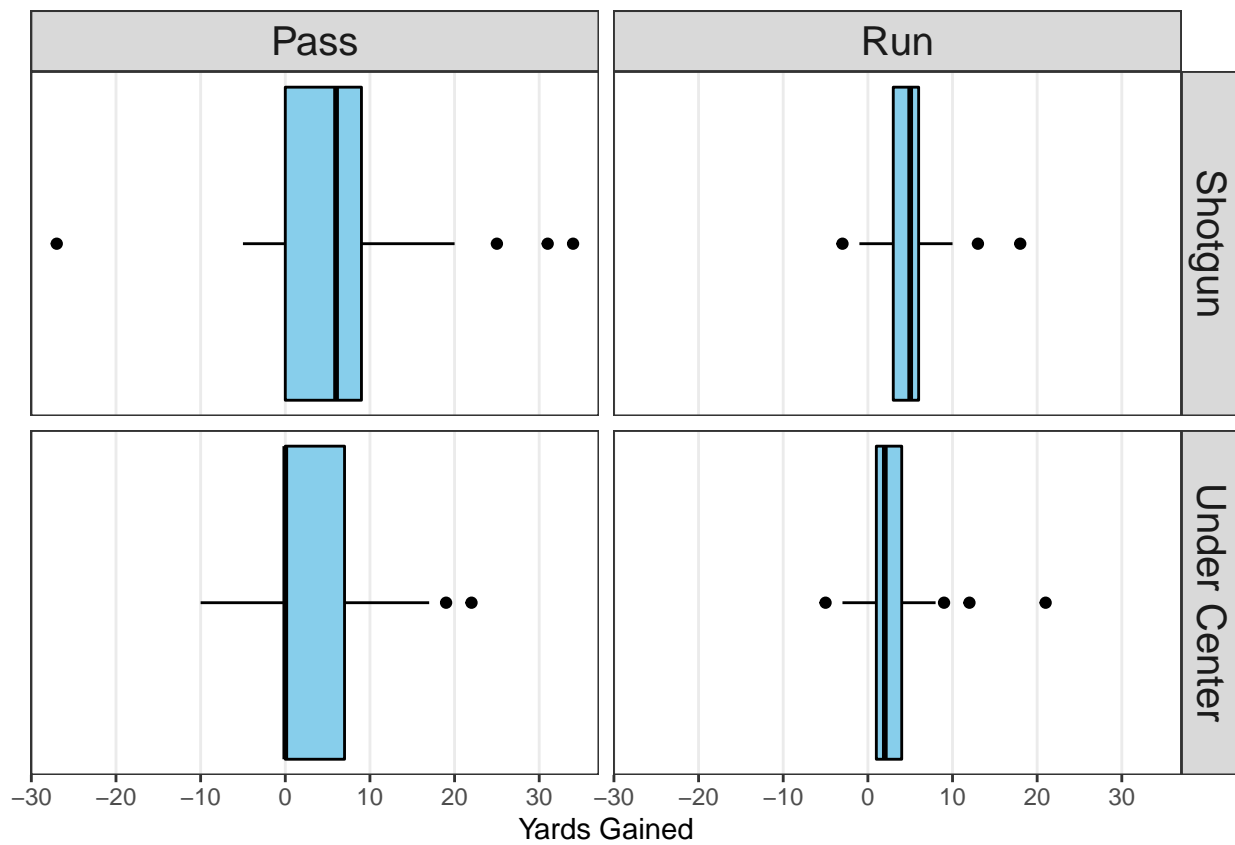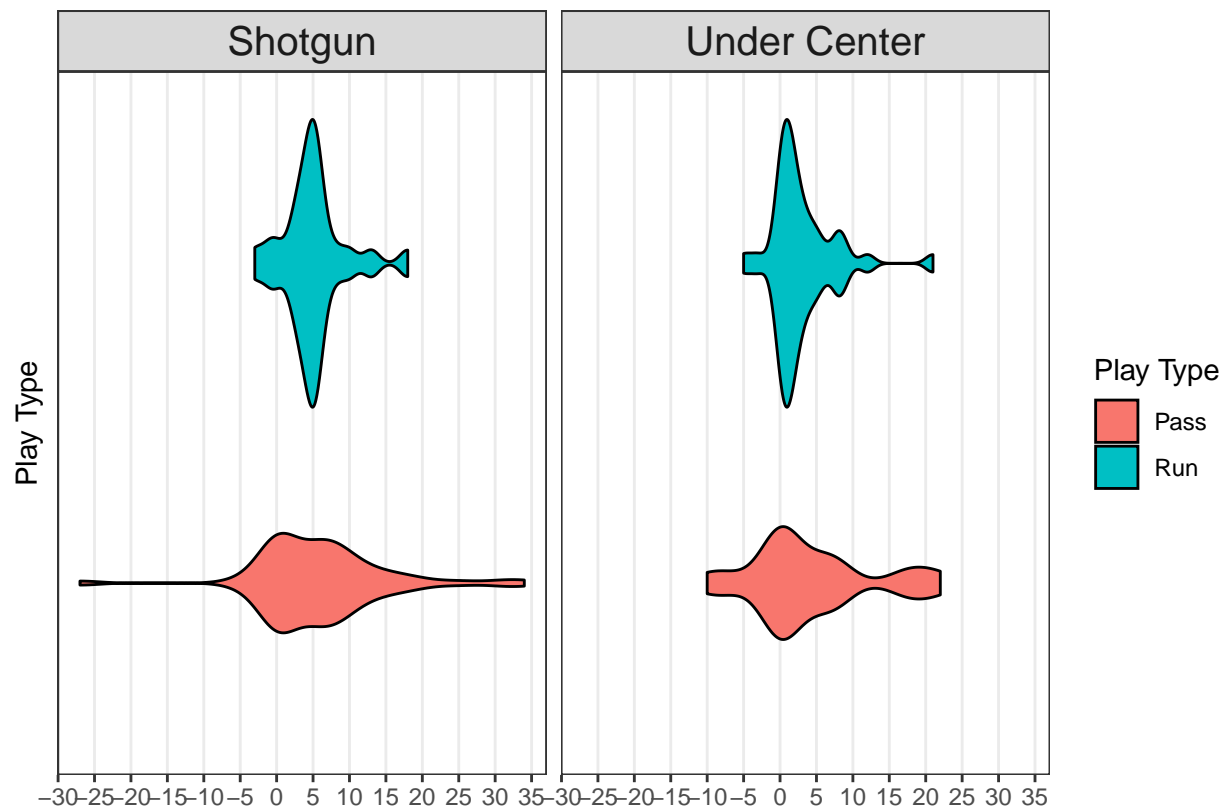
Summary of Anova Model

```
##                              Df Sum Sq Mean Sq F value Pr(>F)
## QB.Position                   1    182  182.21   3.210  0.076 .
## Play.Type                     1     26   25.70   0.453  0.503
## Home                          1     43   43.19   0.761  0.385
## Team                          8     88   10.96   0.193  0.991
## QB.Position:Play.Type         1      0    0.08   0.001  0.970
## QB.Position:Home              1     95   94.89   1.672  0.199
## Play.Type:Home                1     20   20.42   0.360  0.550
## QB.Position:Team              8    374   46.78   0.824  0.583
## Play.Type:Team                7    343   49.00   0.863  0.538
## QB.Position:Play.Type:Home    1     37   37.48   0.660  0.418
## QB.Position:Play.Type:Team    2     39   19.32   0.340  0.712
## Residuals                   106   6017   56.77
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Tukey HSD

```
##    Tukey multiple comparisons of means
##      95% family-wise confidence level
##
## Fit: aov(formula = Yards.Gained ~ QB.Position * Play.Type * Home, data = data)
##
## $QB.Position
##                         diff       lwr       upr     p adj
## Under Center-Shotgun -2.34902 -4.856365 0.1583259 0.0660858
```

```
## 
## $Play.Type
##                diff       lwr      upr     p adj
## Run-Pass -0.7925771 -3.259931 1.674776 0.5262363
## 
## $Home
##        diff       lwr      upr     p adj
## 1-0 1.101828 -1.382884 3.586541 0.3819645
## 
## $`QB.Position:Play.Type`
##                                        diff       lwr      upr     p adj
## Under Center:Pass-Shotgun:Pass       -1.9203125 -7.109359 3.268734 0.7706253
## Shotgun:Run-Shotgun:Pass             -0.9234185 -5.550893 3.704056 0.9543293
## Under Center:Run-Shotgun:Pass        -2.9106627 -6.848114 1.026789 0.2231877
## Shotgun:Run-Under Center:Pass         0.9968939 -5.065386 7.059173 0.9735978
## Under Center:Run-Under Center:Pass  -0.9903503 -6.543839 4.563138 0.9667344
## Under Center:Run-Shotgun:Run         -1.9872442 -7.019992 3.045504 0.7336212
## 
## $`QB.Position:Home`
##                                   diff       lwr      upr     p adj
## Under Center:0-Shotgun:0       -0.7157014 -5.737436 4.306033 0.9825129
## Shotgun:1-Shotgun:0             2.2084877 -2.165599 6.582574 0.5557639
## Under Center:1-Shotgun:0       -1.0447393 -6.260087 4.170608 0.9538353
## Shotgun:1-Under Center:0        2.9241891 -1.399029 7.247407 0.2972661
## Under Center:1-Under Center:0  -0.3290379 -5.501797 4.843721 0.9983787
## Under Center:1-Shotgun:1       -3.2532269 -7.799901 1.293447 0.2495539
## 
## $`Play.Type:Home`
##                  diff       lwr      upr     p adj
## Run:0-Pass:0  -1.2316220 -6.316367 3.853123 0.9221131
## Pass:1-Pass:0  0.7145083 -3.609355 5.038372 0.9732261
## Run:1-Pass:0   0.1935241 -4.374314 4.761362 0.9995182
## Pass:1-Run:0   1.9461303 -2.826511 6.718772 0.7136925
## Run:1-Run:0    1.4251461 -3.569596 6.419888 0.8796903
## Run:1-Pass:1  -0.5209842 -4.738640 3.696671 0.9884659
## 
## $`QB.Position:Play.Type:Home`
##                                            diff       lwr       upr
## Under Center:Pass:0-Shotgun:Pass:0        0.3055556  -8.464238   9.075349
## Shotgun:Run:0-Shotgun:Pass:0             -1.8333333 -13.950544  10.283877
## Under Center:Run:0-Shotgun:Pass:0        -1.7333333  -8.526386   5.059719
## Shotgun:Pass:1-Shotgun:Pass:0             2.1535088  -3.696516   8.003533
## Under Center:Pass:1-Shotgun:Pass:0       -1.3333333 -10.493083   7.826417
## Shotgun:Run:1-Shotgun:Pass:0              0.9956140  -5.894256   7.885485
## Under Center:Run:1-Shotgun:Pass:0        -1.4656863  -8.578167   5.646794
## Shotgun:Run:0-Under Center:Pass:0        -2.1388889 -15.621676  11.343898
## Under Center:Run:0-Under Center:Pass:0   -2.0388889 -11.044683   6.966905
## Shotgun:Pass:1-Under Center:Pass:0        1.8479532  -6.469591  10.165498
## Under Center:Pass:1-Under Center:Pass:0  -1.6388889 -12.541172   9.263394
## Shotgun:Run:1-Under Center:Pass:0         0.6900585  -8.388987   9.769104
## Under Center:Run:1-Under Center:Pass:0   -1.7712418 -11.020357   7.477874
## Under Center:Run:0-Shotgun:Run:0          0.1000000 -12.189094  12.389094
## Shotgun:Pass:1-Shotgun:Run:0              3.9868421  -7.807185  15.780869
## Under Center:Pass:1-Shotgun:Run:0         0.5000000 -13.239625  14.239625
```

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```
## Shotgun:Run:1-Shotgun:Run:0                    2.8289474  -9.513929 15.171824
## Under Center:Run:1-Shotgun:Run:0               0.3676471 -12.100860 12.836154
## Shotgun:Pass:1-Under Center:Run:0              3.8868421  -2.311370 10.085054
## Under Center:Pass:1-Under Center:Run:0         0.4000000  -8.985951  9.785951
## Shotgun:Run:1-Under Center:Run:0               2.7289474  -4.458915  9.916810
## Under Center:Run:1-Under Center:Run:0          0.2676471  -7.133868  7.669163
## Under Center:Pass:1-Shotgun:Pass:1            -3.4868421 -12.214574  5.240889
## Shotgun:Run:1-Shotgun:Pass:1                  -1.1578947  -7.462067  5.146278
## Under Center:Run:1-Shotgun:Pass:1             -3.6191950 -10.165924  2.927534
## Shotgun:Run:1-Under Center:Pass:1              2.3289474  -7.127311 11.785206
## Under Center:Run:1-Under Center:Pass:1        -0.1323529  -9.752015  9.487309
## Under Center:Run:1-Shotgun:Run:1              -2.4613003  -9.951773  5.029173
##                                                          p adj
## Under Center:Pass:0-Shotgun:Pass:0             1.0000000
## Shotgun:Run:0-Shotgun:Pass:0                   0.9997774
## Under Center:Run:0-Shotgun:Pass:0              0.9935851
## Shotgun:Pass:1-Shotgun:Pass:0                  0.9480972
## Under Center:Pass:1-Shotgun:Pass:0             0.9998281
## Shotgun:Run:1-Shotgun:Pass:0                   0.9998363
## Under Center:Run:1-Shotgun:Pass:0              0.9983159
## Shotgun:Run:0-Under Center:Pass:0              0.9996949
## Under Center:Run:0-Under Center:Pass:0         0.9969417
## Shotgun:Pass:1-Under Center:Pass:0             0.9972834
## Under Center:Pass:1-Under Center:Pass:0        0.9997868
## Shotgun:Run:1-Under Center:Pass:0              0.9999980
## Under Center:Run:1-Under Center:Pass:0         0.9989499
## Under Center:Run:0-Shotgun:Run:0               1.0000000
## Shotgun:Pass:1-Shotgun:Run:0                   0.9671103
## Under Center:Pass:1-Shotgun:Run:0              1.0000000
## Shotgun:Run:1-Shotgun:Run:0                    0.9966966
## Under Center:Run:1-Shotgun:Run:0               1.0000000
## Shotgun:Pass:1-Under Center:Run:0              0.5318566
## Under Center:Pass:1-Under Center:Run:0         1.0000000
## Shotgun:Run:1-Under Center:Run:0               0.9391120
## Under Center:Run:1-Under Center:Run:0          1.0000000
## Under Center:Pass:1-Shotgun:Pass:1             0.9213005
## Shotgun:Run:1-Shotgun:Pass:1                   0.9991995
## Under Center:Run:1-Shotgun:Pass:1              0.6853231
## Shotgun:Run:1-Under Center:Pass:1              0.9948362
## Under Center:Run:1-Under Center:Pass:1         1.0000000
## Under Center:Run:1-Shotgun:Run:1               0.9718700
```