Module3: Assignment 2
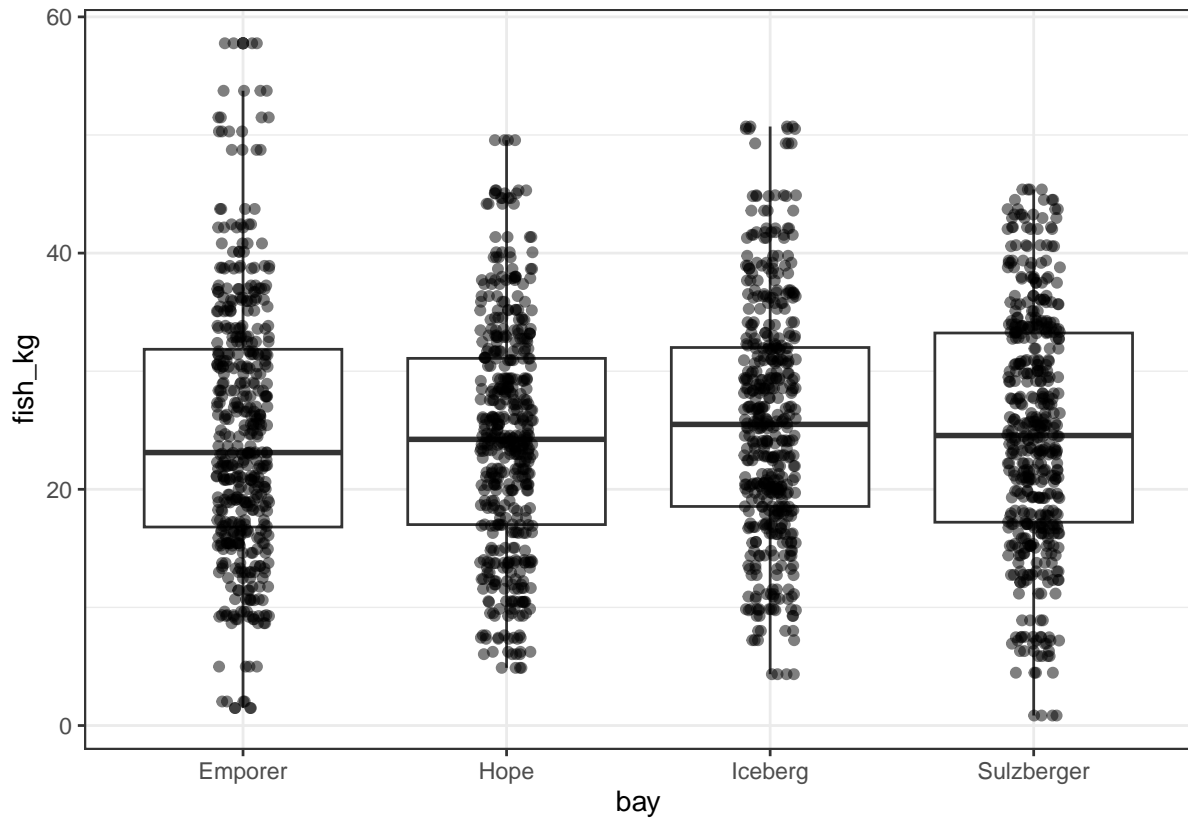
Ellen Bledsoe

2022-11-03

3.

```
## # A tibble: 4 x 3
##   bay        mean_fish sd_fish
##   <chr>          <dbl>   <dbl>
## 1 Emporer         24.9   10.9
## 2 Hope            24.3    9.73
## 3 Iceberg         25.8    9.94
## 4 Sulzberger      24.9    9.98
```


4.

5.

```
##              Df Sum Sq Mean Sq F value Pr(>F)
## bay           3    542   180.6   1.751  0.155
## Residuals  1916 197625   103.1
```
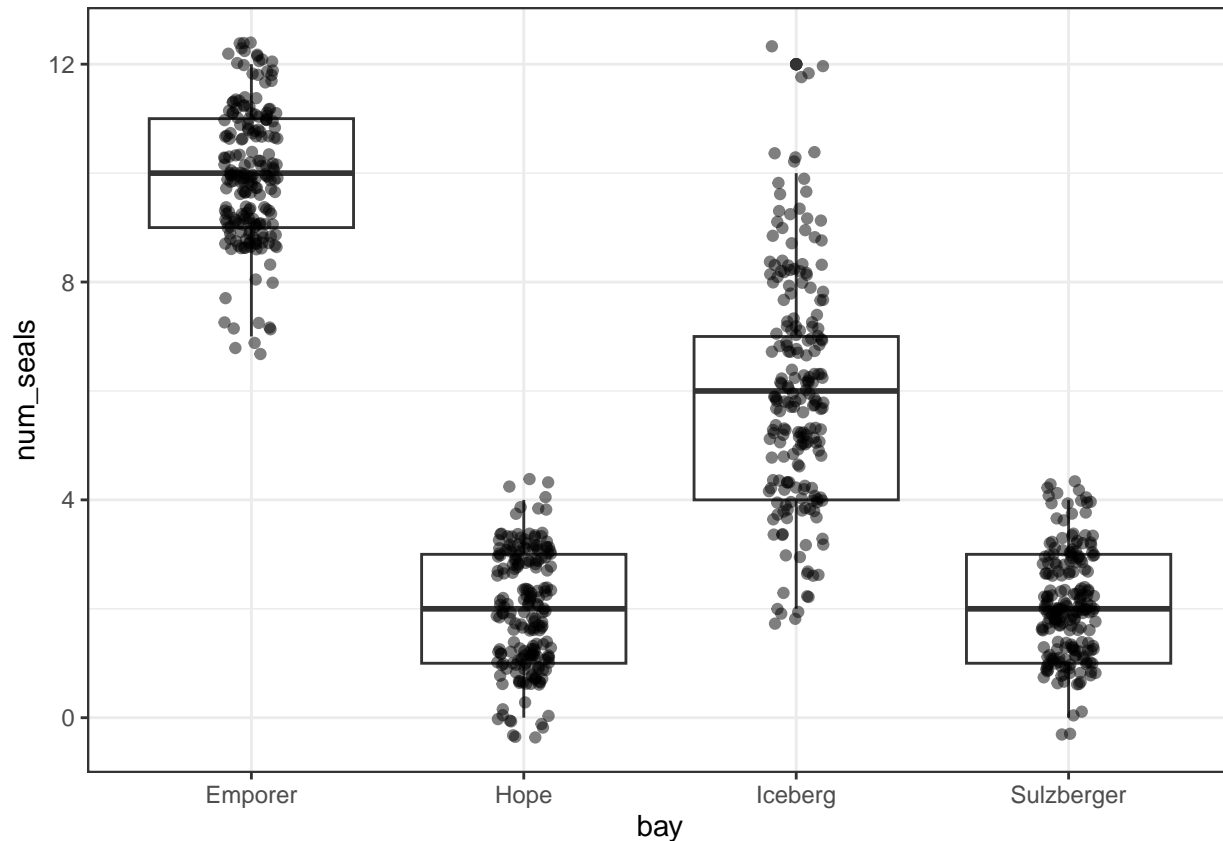
8.

```
##    Tukey multiple comparisons of means
```

```
##      95% family-wise confidence level
##
## Fit: aov(formula = fish_kg ~ bay, data = fish)
##
## $bay
##                          diff        lwr       upr      p adj
## Hope-Emporer       -0.53796408 -2.2236167 1.1476886 0.8447466
## Iceberg-Emporer     0.94195591 -0.7436968 2.6276086 0.4764075
## Sulzberger-Emporer  0.04106038 -1.6445923 1.7267130 0.9999118
## Iceberg-Hope        1.47991999 -0.2057327 3.1655727 0.1085321
## Sulzberger-Hope     0.57902446 -1.1066282 2.2646771 0.8135811
## Sulzberger-Iceberg -0.90089553 -2.5865482 0.7847571 0.5157262
```

11.

```
## # A tibble: 4 x 3
##   bay        mean_fish sd_fish
##   <chr>          <dbl>   <dbl>
## 1 Emporer         9.96   1.19
## 2 Hope            1.96   1.02
## 3 Iceberg         6.02   2.13
## 4 Sulzberger      2.08   0.958
```

12.

13.

```
##             Df Sum Sq Mean Sq F value Pr(>F)
## bay          3   8682    2894    1467 <2e-16 ***
## Residuals  796   1570       2
```

2

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

  15.

```
##   Tukey multiple comparisons of means
##     95% family-wise confidence level
##
## Fit: aov(formula = num_seals ~ bay, data = seals)
##
## $bay
##                      diff       lwr       upr    p adj
## Hope-Emporer        -8.00 -8.3615601 -7.6384399 0.0000000
## Iceberg-Emporer     -3.94 -4.3015601 -3.5784399 0.0000000
## Sulzberger-Emporer  -7.88 -8.2415601 -7.5184399 0.0000000
## Iceberg-Hope         4.06  3.6984399  4.4215601 0.0000000
## Sulzberger-Hope      0.12 -0.2415601  0.4815601 0.8282111
## Sulzberger-Iceberg  -3.94 -4.3015601 -3.5784399 0.0000000
```