Module 2, Assignment 2

Ellen Bledsoe

2024-10-03

1.

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.4.4     v tibble    3.2.1
## v lubridate 1.9.3     v tidyr     1.3.1
## v purrr     1.0.2
## -- Conflicts ---------------------------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

2.

```
## Rows: 320 Columns: 6
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (2): soy_protein, tank_category
## dbl (4): tank_id, fish_id, avg_tank_temp, day_30_weight
##
## 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.
```

```
## # A tibble: 6 x 6
##   tank_id fish_id soy_protein avg_tank_temp tank_category day_30_weight
##     <dbl>   <dbl> <chr>               <dbl> <chr>                 <dbl>
## 1       1       1 low                  77.2 warm                  334.
## 2       1       2 low                  77.2 warm                  198.
## 3       1       3 low                  77.2 warm                  315.
## 4       1       4 low                  77.2 warm                  316.
## 5       1       5 low                  77.2 warm                   89.4
## 6       1       6 low                  77.2 warm                   74.7
```

```
## # A tibble: 6 x 6
##   tank_id fish_id soy_protein avg_tank_temp tank_category day_30_weight
##     <dbl>   <dbl> <chr>               <dbl> <chr>                 <dbl>
## 1      16     315 very high           76.1 warm                  1228.
## 2      16     316 very high           76.1 warm                   630.
## 3      16     317 very high           76.1 warm                   508.
## 4      16     318 very high           76.1 warm                   443.
## 5      16     319 very high           76.1 warm                   495.
## 6      16     320 very high           76.1 warm                  1078.
```

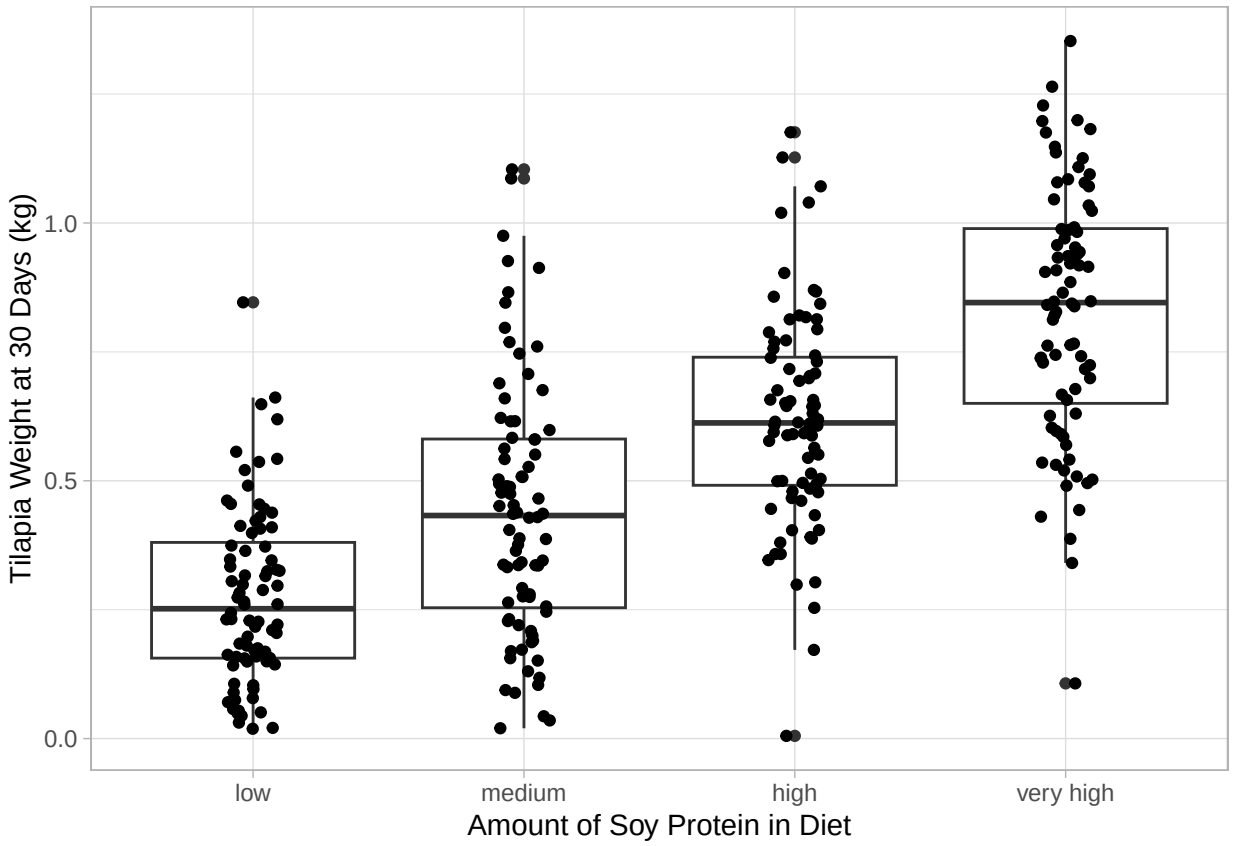
5.

```
##    tank_id fish_id soy_protein avg_tank_temp tank_category day_30_weight
## 1        1       1         low          77.2          warm     333.61062
## 2        1       2         low          77.2          warm     197.65859
## 3        1       3         low          77.2          warm     315.16449
## 4        1       4         low          77.2          warm     316.45632
## 5        1       5         low          77.2          warm      89.43901
## 6        1       6         low          77.2          warm      74.74951
## 7        1       7         low          77.2          warm     141.90766
## 8        1       8         low          77.2          warm      20.77609
## 9        1       9         low          77.2          warm      57.29804
## 10       1      10         low          77.2          warm     158.51861
##    day_30_weight_kg
## 1        0.33361062
## 2        0.19765859
## 3        0.31516449
## 4        0.31645632
## 5        0.08943901
## 6        0.07474951
## 7        0.14190766
## 8        0.02077609
## 9        0.05729804
## 10       0.15851861
```

6.

```
## # A tibble: 4 x 2
##   soy_protein mean_weight_kg
##   <fct>                <dbl>
## 1 low                  0.276
## 2 medium               0.441
## 3 high                 0.618
## 4 very high            0.829
```

7.

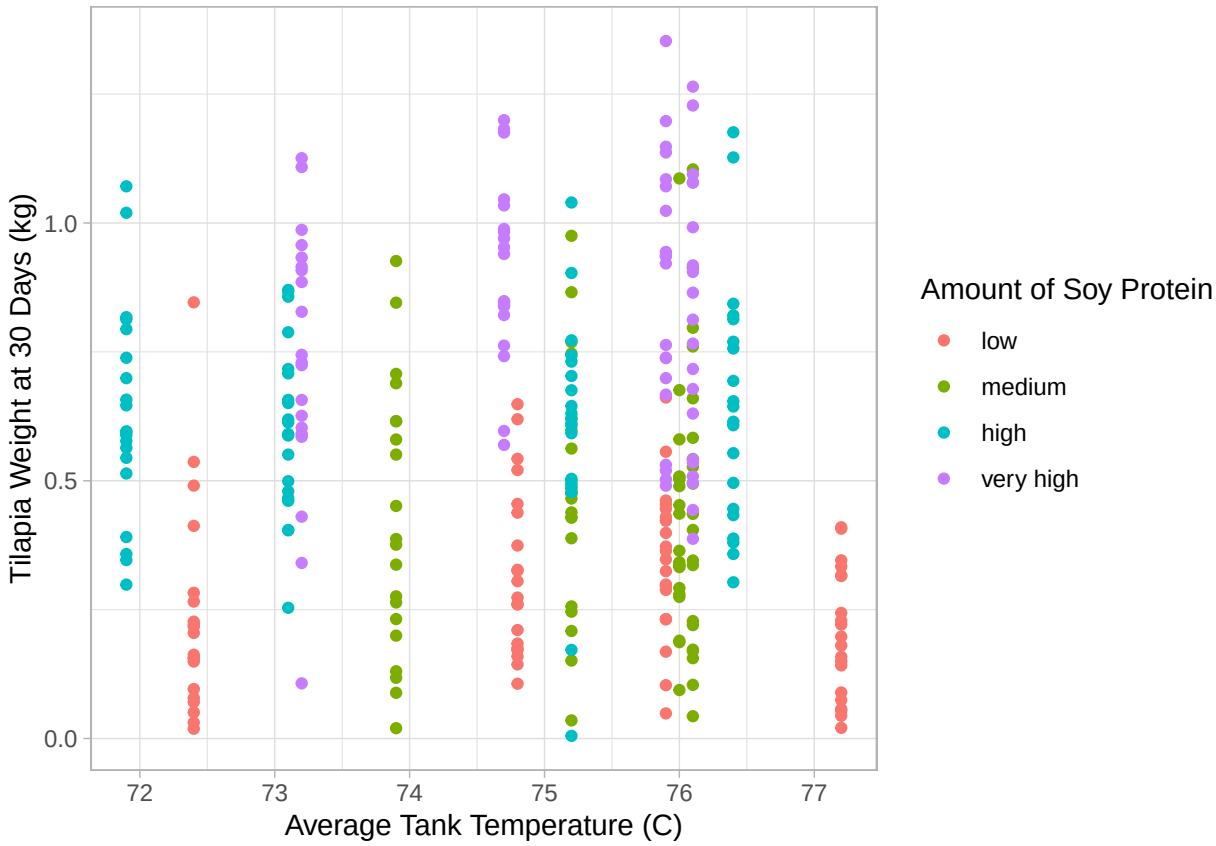


8.

```
## `summarise()` has grouped output by 'soy_protein'. You can override using the
## `.groups` argument.
```

```
## # A tibble: 8 x 3
## # Groups:   soy_protein [4]
##   soy_protein tank_category mean_weight_kg
##   <fct>       <chr>                  <dbl>
## 1 low         cold                   0.279
## 2 low         warm                   0.272
## 3 medium      cold                   0.420
## 4 medium      warm                   0.448
## 5 high        cold                   0.617
## 6 high        warm                   0.620
## 7 very high   cold                   0.824
## 8 very high   warm                   0.833
```

9.


Tilapia Weight at 30 Days (kg)
1.0
0.5
0.0
72
73
74
75
76
77
Average Tank Temperature (C)
Amount of Soy Protein
low
medium
high
very high