Module 2, Assignment 2

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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 (1): tank_category
## dbl (5): tank_id, fish_id, perc_soy_protein, day_30_weight, avg_tank_temp
##
## 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 perc_soy_protein day_30_weight avg_tank_temp tank_category
##     <dbl>   <dbl>            <dbl>         <dbl>         <dbl> <chr>
## 1       1       1              0.2         334.           77.2 warm
## 2       1       2              0.2         198.           77.2 warm
## 3       1       3              0.2         315.           77.2 warm
## 4       1       4              0.2         316.           77.2 warm
## 5       1       5              0.2          89.4          77.2 warm
## 6       1       6              0.2          74.7          77.2 warm
```

```
## # A tibble: 6 x 6
##   tank_id fish_id perc_soy_protein day_30_weight avg_tank_temp tank_category
##     <dbl>   <dbl>            <dbl>         <dbl>         <dbl> <chr>
## 1      16     315              0.8         1228.           76.1 warm
## 2      16     316              0.8          630.           76.1 warm
## 3      16     317              0.8          508.           76.1 warm
## 4      16     318              0.8          443.           76.1 warm
## 5      16     319              0.8          495.           76.1 warm
## 6      16     320              0.8         1078.           76.1 warm
```

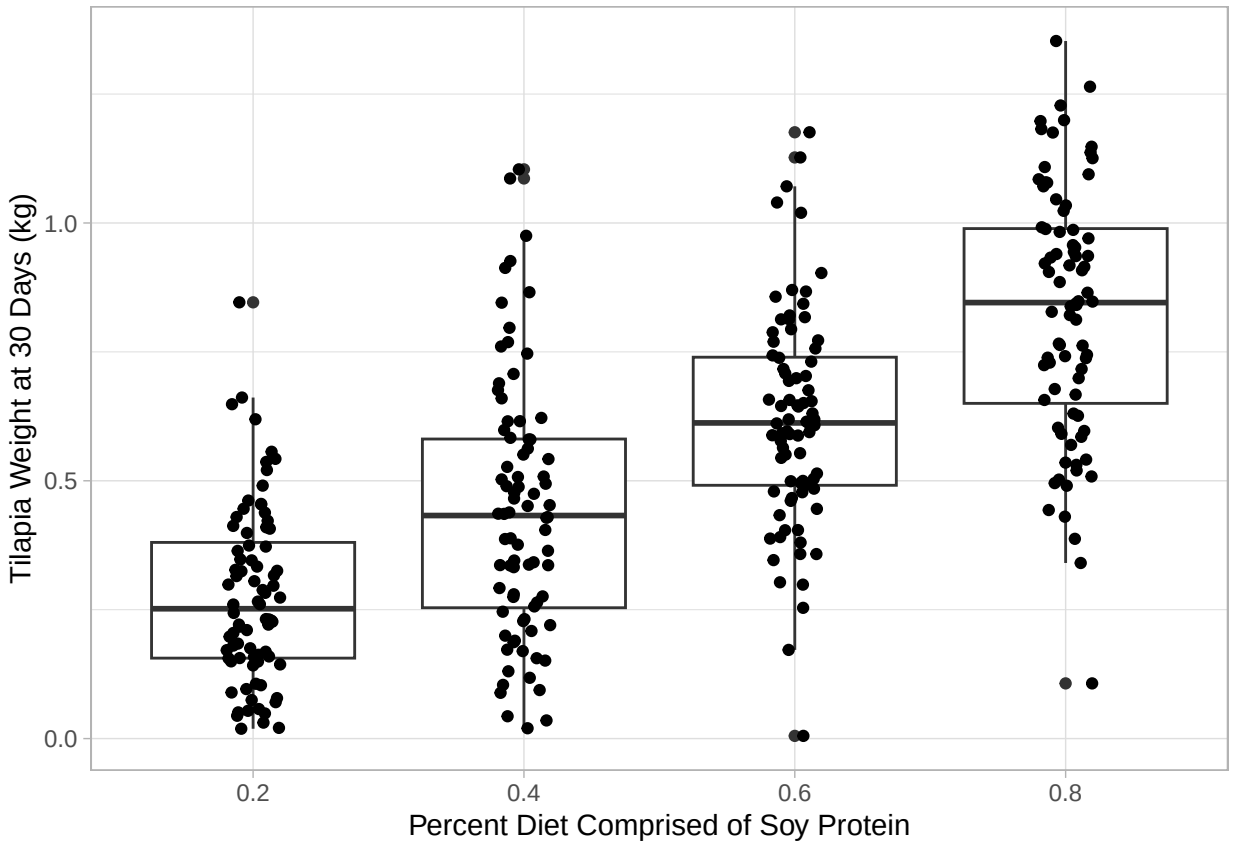
5.

```
##   tank_id fish_id perc_soy_protein day_30_weight avg_tank_temp tank_category
## 1       1       1              0.2     333.61062          77.2          warm
## 2       1       2              0.2     197.65859          77.2          warm
## 3       1       3              0.2     315.16449          77.2          warm
## 4       1       4              0.2     316.45632          77.2          warm
## 5       1       5              0.2      89.43901          77.2          warm
## 6       1       6              0.2      74.74951          77.2          warm
##   day_30_weight_kg
## 1       0.33361062
## 2       0.19765859
## 3       0.31516449
## 4       0.31645632
## 5       0.08943901
## 6       0.07474951
```

6.

```
## # A tibble: 4 x 2
##   perc_soy_protein mean_weight_kg
##   <fct>                     <dbl>
## 1 0.2                       0.276
## 2 0.4                       0.441
## 3 0.6                       0.618
## 4 0.8                       0.829
```

7.

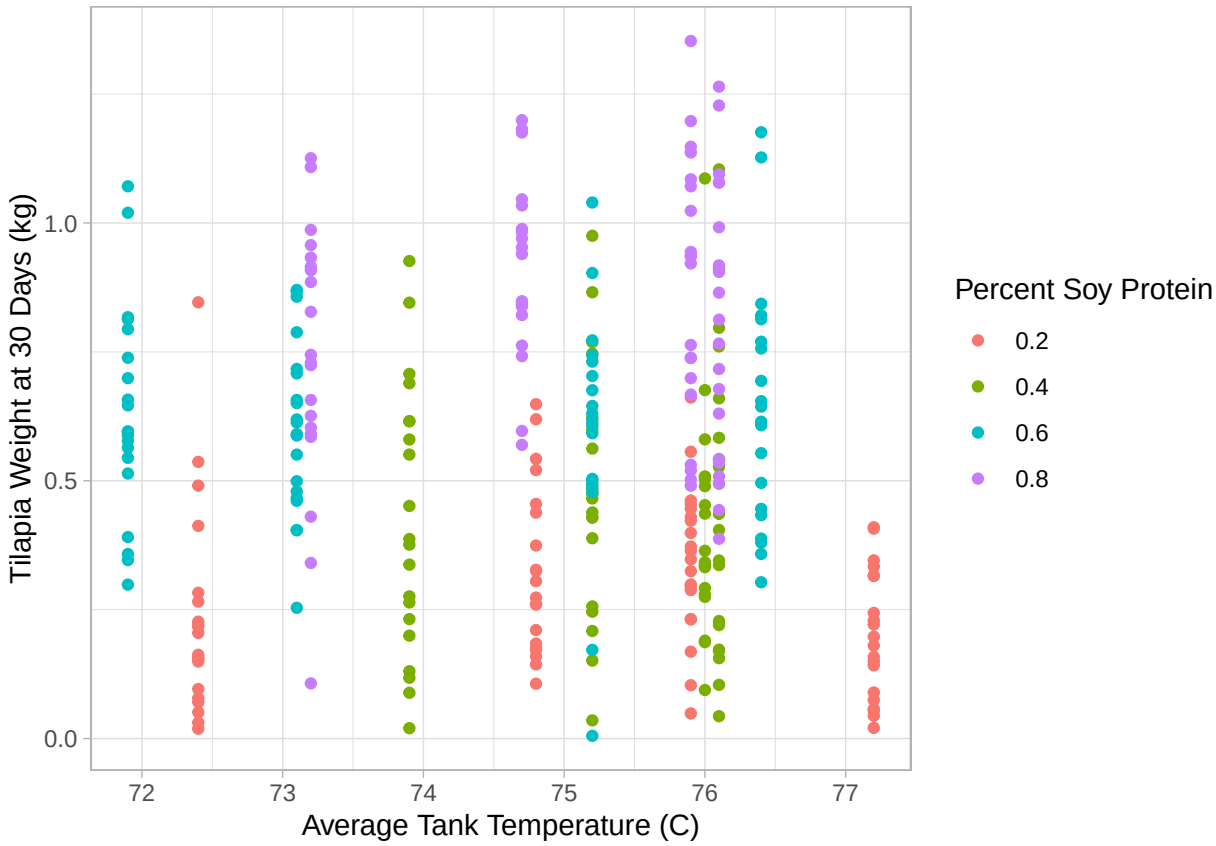


8.

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

```
## # A tibble: 8 x 3
## # Groups:   perc_soy_protein [4]
##   perc_soy_protein tank_category mean_weight_kg
##   <fct>            <chr>                 <dbl>
## 1 0.2              cold                  0.279
## 2 0.2              warm                  0.272
## 3 0.4              cold                  0.420
## 4 0.4              warm                  0.448
## 5 0.6              cold                  0.617
## 6 0.6              warm                  0.620
## 7 0.8              cold                  0.824
## 8 0.8              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)
Percent Soy Protein
0.2
0.4
0.6
0.8