WS #4 - Verbs

Wednesday, September 10, 2025

DS 002R - Jo Hardin

Name: _____

Names of people you worked with: _____

Work in groups of 3-4. Do you remember everyone's name? Tell your group about one talk/performance/event/activity not related to your classes that you are looking forward to in the coming weeks.

Task: Consider the `diamonds` dataset (all the variables names are given). Below are 2 tasks which can be accomplished using the following syntax (exactly two verbs before `arrange()`). **Identify the data verbs and arguments for accomplishing each task** (the dataset includes the columns `x`, `y`, and `z` which are length, width, and depth in mm). Note, you may not need the last `arrange()`, but it won't cause errors.[1]

```
diamonds |>
  verb1( args1 ) |>
  verb2( args2 ) |>
  arrange( args3 ) |>
  head(1)
```

```
# A tibble: 3 x 10
  carat cut     color clarity depth table price     x     y     z
  <dbl> <ord>   <ord> <ord>   <dbl> <dbl> <int> <dbl> <dbl> <dbl>
1  0.23 Ideal   E     SI2      61.5    55   326  3.95  3.98  2.43
2  0.21 Premium E     SI1      59.8    61   326  3.89  3.84  2.31
3  0.23 Good    E     VS1      56.9    65   327  4.05  4.07  2.31
```

1. Which `color` diamond in this dataset is the largest on average (in terms of `carat`)?
2. What is the average `price` per `carat` of diamonds for the subset of diamonds that cost more than $10,000 total?

[1] From **Data Computing**, Daniel Kaplan

Solution:

1. Which color diamond in this dataset is the largest on average (in terms of carats)?

```
diamonds |>
  group_by( color ) |>
  summarize( avesize = mean(carat) ) |>
  arrange( desc(avesize) ) |>
  head(1)
```

```
# A tibble: 1 x 2
  color avesize
  <ord>   <dbl>
1 J        1.16
```

2. What is the average price per carat of diamonds for the subset of diamonds that cost more than $10,000 total?

```
diamonds |>
  filter(price > 10000) |>
  summarise( mean.ppc = mean(price/carat) ) |>
  arrange( desc(mean.ppc) ) |>
  head(1)
```

```
# A tibble: 1 x 1
  mean.ppc
     <dbl>
1    8044.
```