stat hw 1

2022-09-26

library(tidyverse)

## ── Attaching packages ─────────────────────────────────────── tidyverse 1.3.2 ──  
## ✔ ggplot2 3.3.6 ✔ purrr 0.3.4   
## ✔ tibble 3.1.8 ✔ dplyr 1.0.10  
## ✔ tidyr 1.2.1 ✔ stringr 1.4.1   
## ✔ readr 2.1.2 ✔ forcats 0.5.2   
## ── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()

pain<- read.csv("pain.csv")  
score<- pain$Score  
haircolor<- pain$HairColor

mean(score)

## [1] 47.84211

sd(score)

## [1] 11.4565

db<- filter(pain, haircolor == "DarkBrunette")   
db

## HairColor Score  
## 1 DarkBrunette 32  
## 2 DarkBrunette 39  
## 3 DarkBrunette 51  
## 4 DarkBrunette 30  
## 5 DarkBrunette 35

mean(db$Score)

## [1] 37.4

lb<- filter(pain, haircolor == "LightBrunette")  
lb

## HairColor Score  
## 1 LightBrunette 42  
## 2 LightBrunette 50  
## 3 LightBrunette 41  
## 4 LightBrunette 37

sd(lb$Score)

## [1] 5.446712

count(lb)

## n  
## 1 4

pain %>%  
 group\_by(HairColor) %>%  
 summarise(HairColor, mean=mean(Score)) %>%  
 arrange(desc(mean))

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

## # A tibble: 19 × 2  
## # Groups: HairColor [4]  
## HairColor mean  
## <chr> <dbl>  
## 1 LightBlond 59.2  
## 2 LightBlond 59.2  
## 3 LightBlond 59.2  
## 4 LightBlond 59.2  
## 5 LightBlond 59.2  
## 6 DarkBlond 51.2  
## 7 DarkBlond 51.2  
## 8 DarkBlond 51.2  
## 9 DarkBlond 51.2  
## 10 DarkBlond 51.2  
## 11 LightBrunette 42.5  
## 12 LightBrunette 42.5  
## 13 LightBrunette 42.5  
## 14 LightBrunette 42.5  
## 15 DarkBrunette 37.4  
## 16 DarkBrunette 37.4  
## 17 DarkBrunette 37.4  
## 18 DarkBrunette 37.4  
## 19 DarkBrunette 37.4

pain %>%  
 group\_by(HairColor) %>%  
 summarise(HairColor, standard\_dev=sd(Score)) %>%  
 arrange(standard\_dev)

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

## # A tibble: 19 × 2  
## # Groups: HairColor [4]  
## HairColor standard\_dev  
## <chr> <dbl>  
## 1 LightBrunette 5.45  
## 2 LightBrunette 5.45  
## 3 LightBrunette 5.45  
## 4 LightBrunette 5.45  
## 5 DarkBrunette 8.32  
## 6 DarkBrunette 8.32  
## 7 DarkBrunette 8.32  
## 8 DarkBrunette 8.32  
## 9 DarkBrunette 8.32  
## 10 LightBlond 8.53  
## 11 LightBlond 8.53  
## 12 LightBlond 8.53  
## 13 LightBlond 8.53  
## 14 LightBlond 8.53  
## 15 DarkBlond 9.28  
## 16 DarkBlond 9.28  
## 17 DarkBlond 9.28  
## 18 DarkBlond 9.28  
## 19 DarkBlond 9.28

pain %>%  
 group\_by(HairColor) %>%  
 count()

## # A tibble: 4 × 2  
## # Groups: HairColor [4]  
## HairColor n  
## <chr> <int>  
## 1 DarkBlond 5  
## 2 DarkBrunette 5  
## 3 LightBlond 5  
## 4 LightBrunette 4