Random Variables

your name

2024-09-26

Math 2265 Chatch-up

- Work as a group!
- You will need to replace `"ans"` or `your_answer` in the source code or answer questions
- Update your name in L3
- Make sure your save and `knit` your work (to html or pdf) before submitting it to Canvas

Question 0. Who are your group members? (List their first names should be sufficient)

Answer:

1. `<name_1>`
2. `<name_2>`

Load Packages

```
## Loading required package: airports
```

```
## Loading required package: cherryblossom
```

```
## Loading required package: usdata
```

If you need more time to get used to `Markdown`, use the `Visual` mode.

The icon is located in the upper-left corner next to `source`.

Task 1

Go to the data set list and choose one you are most interested in:

https://www.openintro.org/data/

Use `str` and `head` to checkout the dataset.

```
# Define the winnings for X and their respective probabilities P(X)
str(absenteeism)
```

```
## tibble [146 x 5] (S3: tbl_df/tbl/data.frame)
##  $ eth : Factor w/ 2 levels "A","N": 1 1 1 1 1 1 1 1 1 1 ...
##  $ sex : Factor w/ 2 levels "F","M": 2 2 2 2 2 2 2 2 2 2 ...
##  $ age : Factor w/ 4 levels "F0","F1","F2",..: 1 1 1 1 1 1 1 1 2 2 ...
##  $ lrn : Factor w/ 2 levels "AL","SL": 2 2 2 1 1 1 1 1 2 2 ...
##  $ days: int [1:146] 2 11 14 5 5 13 20 22 6 6 ...
```

```r
# Define the winnings for X and their respective probabilities P(X)
head(absenteeism)
```

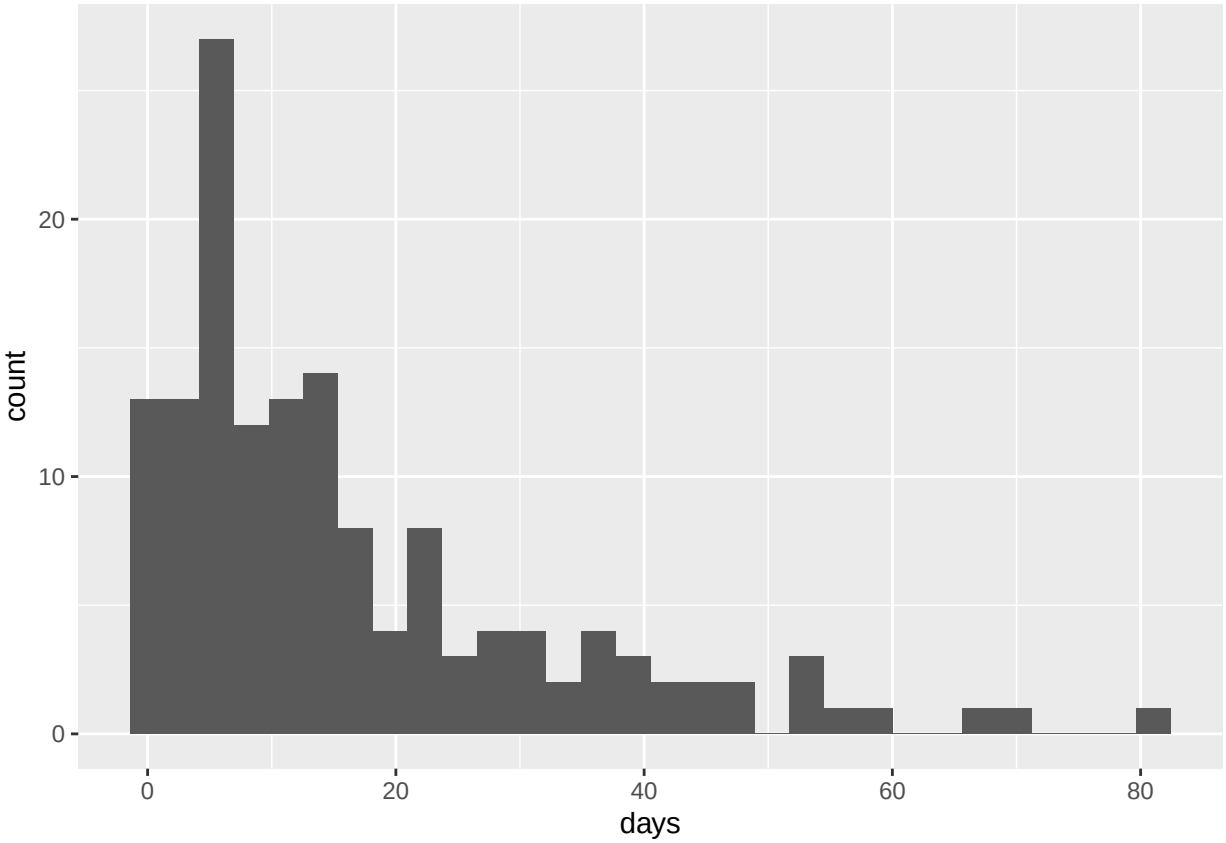
```
## # A tibble: 6 x 5
##   eth   sex   age   lrn    days
##   <fct> <fct> <fct> <fct> <int>
## 1 A     M     F0    SL        2
## 2 A     M     F0    SL       11
## 3 A     M     F0    SL       14
## 4 A     M     F0    AL        5
## 5 A     M     F0    AL        5
## 6 A     M     F0    AL       13
```

Task 2

Choose a numerical variable and plot its histogram.

```r
# Define the winnings for X and their respective probabilities P(X)
ggplot(data=absenteeism, aes(x=days)) +
  geom_histogram()
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



Task 3

Choose a categorical varialbe and make a table.

```r
# Define the winnings for X and their respective probabilities P(X)
table(absenteeism$sex)
```

```
##
##  F  M
## 80 66
```

Task 4. Knit your code and check your outcomes.

You are only allowed to upload pdf or html

Share your work and help your group members before uploading your work to Canvas