# Lab 3 - Improving the Default Visualization

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10/10/2023

In this lab, we are going to improve some of the plots from Lab 2 by adding aesthetics to the plot.

### Libraries

Load the necessary libraries.

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
             1.1.3
## v dplyr
                       v readr
                                   2.1.4
## v forcats
             1.0.0
                       v stringr
                                   1.5.0
## v ggplot2 3.4.3
                       v tibble
                                   3.2.1
## v lubridate 1.9.3
                       v tidyr
                                   1.3.0
              1.0.2
## v purrr
## -- Conflicts ----- tidyverse conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag() masks stats::lag()
## i Use the conflicted package (<a href="http://conflicted.r-lib.org/">http://conflicted.r-lib.org/</a>) to force all conflicts to become error
```

### Data

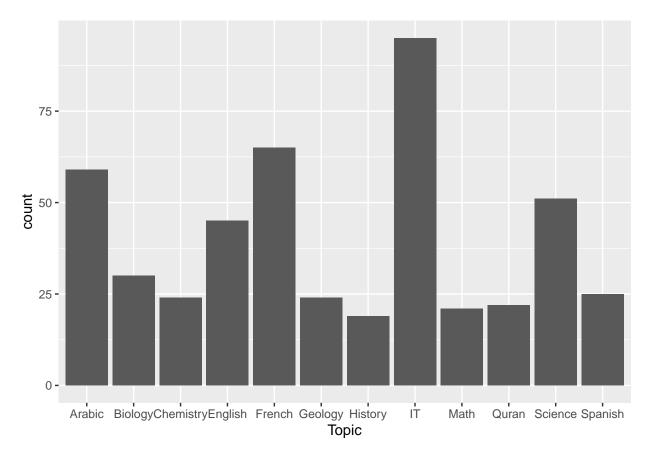
Load the data.

```
df_edu <- read_csv("../data/xAPI-Edu-Data.csv")</pre>
## Rows: 480 Columns: 13
## -- Column specification -----
## Delimiter: ","
## chr (9): gender, GradeID, Topic, Semester, Relation, ParentAnsweringSurvey, ...
## dbl (4): raisedhands, VisitedResources, AnnouncementsView, Discussion
## 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.
```

## Plot 1

Complete the cell with the code to improve the plot. You may add labels and title, change the size of the labels, fill the bars with color...

```
ggplot(df_edu, aes(x=Topic)) + geom_bar()
```



Plot 2

Complete the cell with the code to improve the plot. You may add labels and title, change the size of the labels, change the number of bins. . .

```
ggplot(df_edu, aes(x=VisitedResources)) + geom_histogram()
```

## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.

