

# Workshop 3

10/11/2020

Rmarkdown and Shiny

# Exercise 1

- Download the following dataset:  
<https://drive.google.com/drive/folders/1doMk8cQUMsQ7DK3yeY-shbhDI76K-a3d?usp=sharing>

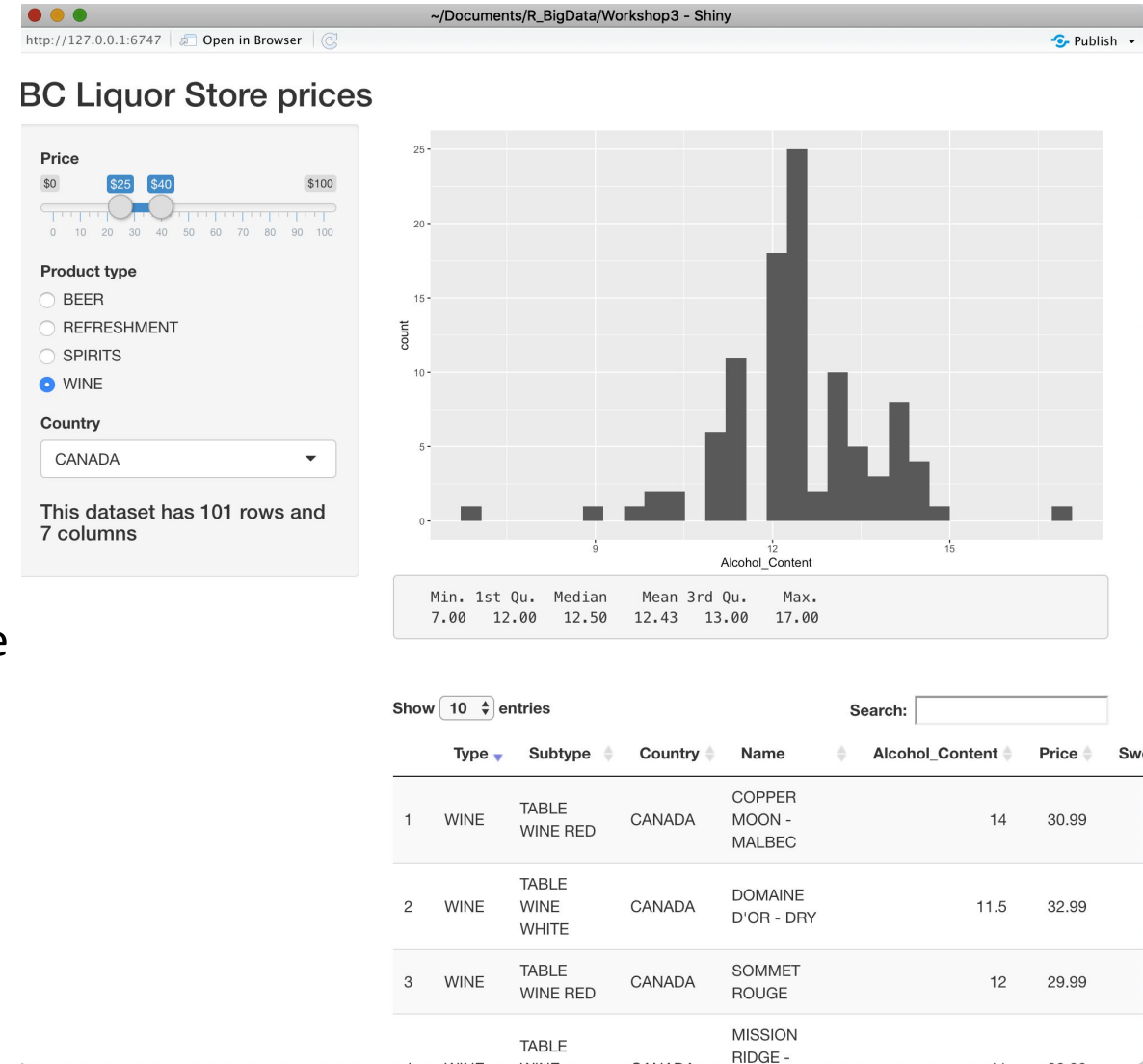
- Create a Shiny App that looks like the one in the picture.

Set the following choices for countries:

- CANADA
- FRANCE
- ITALY
- UNITED STATES OF AMERICA

- Create the same Shiny App using reactive{} function when defining data in server.

In this case the choices will include all countries in the dataset, that will be shown sorted in an alphabetic order.



## Exercise 2

- Create a Shiny App with title “Diagnostics for simple linear regression” and subtitle the R and r-squared indexes. As input you can select 4 different trends (Positive Linear, Negative Linear, Curved up, Curved down).

In the main panel you will have as output the regression model plot (scatter plot of data and the regression line) and below the following diagnostics plot for the residuals of the user – specified linear regression model:

- Residuals vs Fitted Values
- Histogram of residuals
- Q-Q Plot of residuals
- Add an input button that if clicked will show the residuals in the plot.



# Diagnostics for simple linear regression

Select a trend:

- ☒ Linear up
- ☐ Linear down
- ☐ Curved up
- ☐ Curved down

☐ Show residuals

