

Homework 8

Due date: March 30, 2022, at 4:00 pm

We will continue working with the csv comprising the Canada health indexes, but this time we want to incorporate a bar, scatter, and histogram plots. We also will use sliders and data tables.

The dashboard has two sections. Both sections shared a dropdown menu that indicates the health indicator to display in the dashboard.

In Section 1, the input components are:

- Slider for age group: The user can select one of the available age groups.
- Slider for sex group: The user can select one of the available sex options.
- Slider for the units: This is to determine which units are used for the two figures of section 1. The csv file has a column named 'UOM', which has two options: Numeric or Percent. The value of this slider is used to filter the data in the callback function using the 'Characteristic' column. When Numeric is selected, the 'Characteristic' value is 'Number of persons', whereas for 'Percent', the 'Characteristic' value is 'Percent'.
- Dropdown menu for selecting a year.

The outputs for the Section 1 are:

- A horizontal bar shows the selected index for the age, sex, unit, and year selected. The values should be sorted by the index value. Enable the x-log axis for this plot.
- Scatter plot showing the lower and upper confidence intervals of the index, as well as the index value. If the select units are 'Numeric', the confidence intervals are called 'Low 95% confidence interval, number of persons' and 'High 95% confidence interval, number of persons'. If the unit is the percent, the confidence intervals are called 'Low 95% confidence interval, percent' and 'High 95% confidence interval, percent'.
- A DataTable showing if the value of the select year for each province is significantly different from the previous year, as well as from the Canadian ratio. In the csv file, this info is in the Characteristic column. A value of 1 means significant difference, while 0 means no significance difference. A -1 or blank cells means there is no available data ('N/A').



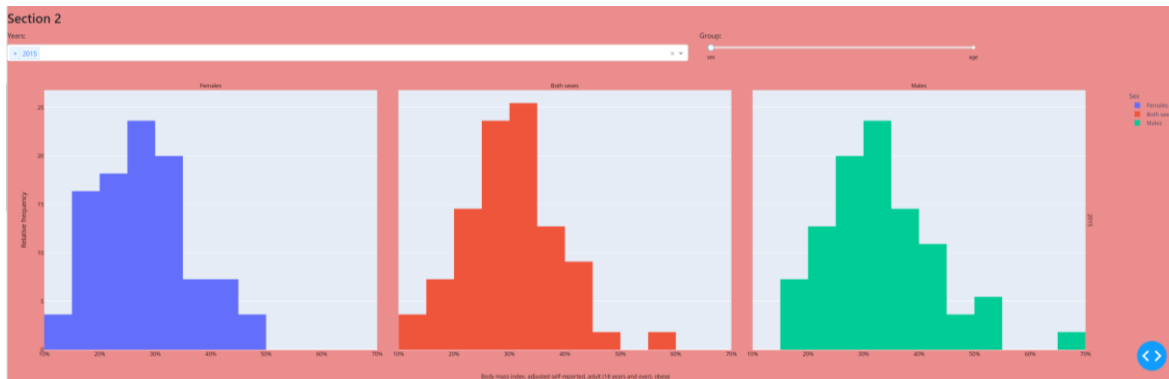
For section 2, we have the following inputs:

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- Dropdown menu that allows selecting multiple years.
- Slider to select the group feature for the histogram plots.

The output is a histogram in which years if used for facet rows, and the group is used for facet columns. The color attribute is also set with the group (age or sex) selected. For Section 2, the 'Characteristic' for filtering the data is Percent. The x-axis should include the property `ticksuffix='%'`.



The app has a light red color (#EC8D8D) in the background. You could use the same color, or any other you prefer.

The attached video shows a demo of the dashboard.