

Data Management - Exercises on 05.09.17

Interactive Graphics

1. The first example demonstrated static and dynamic plot of normal distribution. Please use two `sliderInput` to control two parameters, mean and standard deviation. Change the example into an interactive graphic.
2. Please use `add_tooltip` in `ggvis` package to replicate the example, balance of Taiwan (2015).
3. Let us make some changes in rolling dices and expectation example:
 - remove the sampling distribution plot.
 - in the `barplot`, draw all outcomes you have already rolled.
 - add an `actionButton`, which can roll 100 times once clicked. (Don't forget to increase some data!)
 - (optional) setup some inputs in `ui.R` to control the parameter of the distribution of your dice.
4. Designing user interface could be challenging sometimes. In hot-hand example, we hide the submit button just as Harden finished his game, avoid mistakenly input from users. Now we are facing another problem, the `datatable` always displays first 10 rows of `data.frame`. It is difficult for user to observe what was her/his latest input. Find out a better way to show your user what she/he had done just a second before.
5. In recognition memory example, one can implement a simple experiment by interactivity of `shiny`. We use many `observe`, `observeEvent`, and `reactive` functions to handle participant's behavior. Still, the application could be improve into a better one.
 - Add ending: hide `b2_recog` and show the ending instructions.
 - Font size of instructions: change the font into a comfortable size with neatly layout.
 - (optional) One advantage of web application is device free (e.g., tablet, smartphone), all we need is a browser. In our example, keyboard input does not fit this requirement and it records twice as we saw in the demo. Try to solve this problem by, (1) using keyboard input correctly, (2) remove keyboard and try another input.
 - (optional) Can you figure out, how to record reaction time precisely in shiny?