Lab 7 Submission

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Instructions

Complete the lab tutorial before completing this file. Use the R Markdown version of this file to complete and submit your homework. Items in **bold** require an answer. Make sure you change the author in the header to your own name.

In the lab you simulated p-values under various scenarios.

1. **Describe what a histogram of the simulated p-values will look like in a scenario where the p-values are valid.** The amount of p-values in different value of 0 to 1 should be similar. The distribution should looks like a rectangle.

2. **Describe an example of what a histogram of the simulated p-values may look like in a scenario where the p-values are not valid.** Image a Beta(0.5,0.5) and Uniform(0,1). We take 10 items for one and 30 from another, then calculate the p-values. We do this 10000 times and draw a picture of the distribution of p-values.It may looks like an axe, which has a higher pillar in one side and low values for the rest of x-axis.

3. **To examine the validity of p-values, data was simulated to satisfy the null hypothesis. Why is it unnecessary to generate data that satisfies the null hypothesis when you evaluate the validity of confidence intervals?** Because we want check if the CI still works well when the null is false.