UDACITY

PROJECT

Analyze A/B Test Results

A part of the Data Analyst Nanodegree Program

PROJECT REVIEW

NOTES

SHARE YOUR ACCOMPLISHMENT!

Meets Specifications

CONGRATULATIONS !!!!

Code Quality

All code cells can be run without error.

Docstrings, comments, and variable names enable readability of the code.

A faster way to simulate the 10000 trials

- When possible, it is always more computationally efficient to use `numpy` built-in operations over explicit `for` loops. The short reason is that `numpy`-based operations attack a computational problem based on vectors by computing large chunks simultaneously.
- Additionally, using loops to simulate 10000 can take a considerable amount of time vs using `numpy` https://softwareengineering.stackexchange.com/questions/254475/how-do-i-move-away-from-the-for-loop-school-of-thought

```
new_converted_simulation = np.random.binomial(n_new, p_new,  10000)/n_new
old_converted_simulation = np.random.binomial(n_old, p_old,  10000)/n_old
p_diffs = new_converted_simulation - old_converted_simulation
```

- Essentially, we are applying the null proportion to the total size of each page using the binomial distribution. Each element, for example, in `np.random.binomial(n_new, p_new, 10000)` results in an array with values like `[17262, 17250, 17277...]`. This array is 10000 elements large
- When we divide it by `n_new`, Python broadcasts `n_new` for each element and we return a proportion for each element.
- This is essentially is simulating, 10000, the new page conversion rate.
- We do this again for the old page.
- The difference of the two will result in a simulated difference array of length 10000 between the new page and old page conversions.
- **Note** that this method does not require you to calculate the null values to get the p-value.

Statistical Analyses

All results from different analyses are correctly interpreted.

For all numeric values, you should provide the correct results of the analysis.

AWESOME
Getting the stats calculations for both the simulation and z-test correct is difficult at this stage. Great work.

Conclusions should include not only statistical reasoning, but also practical reasoning for the situation.

- **Spot On!!!** Great intuition with the relationship between the different hypotheses statements.
- **Extra Credit** Knowing that Part iii is a two-tailed test and Part ii is a one-tail test, can you convert the p-values between each other?

DOWNLOAD PROJECT

RETURN TO PATH

Rate this review

Student FAQ