UDACITY

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Analyze A/B Test Results

REVIEW

HISTORY

Meets Specifications

Congratulations, you have done a great job with this project. Your exploration of the data was interesting, as well as insightful. It is clear that you have put a great amount of effort and thought into this project. You proved deep comprehension with A/B testing by following the right approach to get the right answer for the analysis questions.

Check tutorials for implementing A/B testing with Python:

- Implementing A/B Tests in Python
- The Math Behind A/B Testing with Example Python Code
- How to perform an A/B test correctly in Python

Keep up the Hard Work

Code Quality

All code cells can be run without error.

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

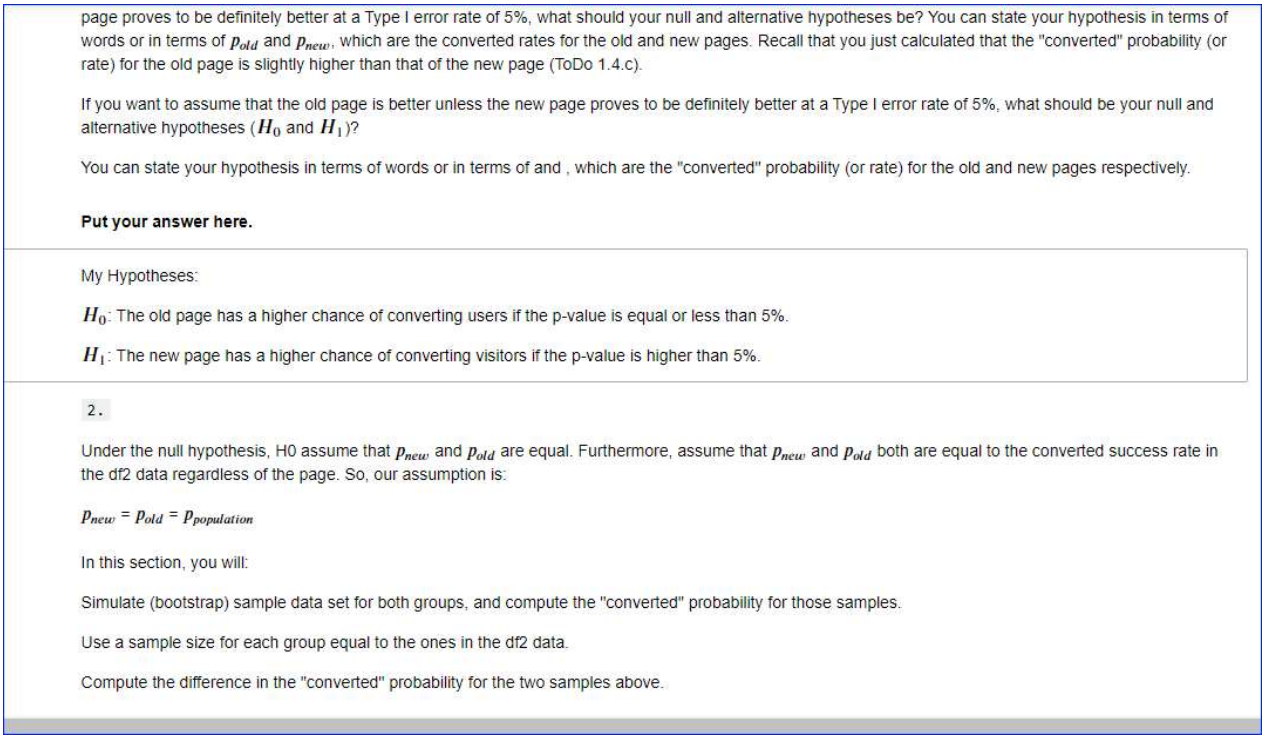
Statistical Analyses

All results from different analyses are correctly interpreted.

- In "Part II - A/B Test", student should correctly interpret the test statistic and p-value.
- In "Part III - A regression approach", student should correctly analyze the interaction effects on all of p-value and statistical significance to predict conversions.

Great work, all the results of the statistical analyses have good interpretation with clear and concise conclusions.

Recommendation:



page proves to be definitely better at a Type I error rate of 5%, what should your null and alternative hypotheses be? You can state your hypothesis in terms of words or in terms of p_{old} and p_{new}, which are the converted rates for the old and new pages. Recall that you just calculated that the "converted" probability (or rate) for the old page is slightly higher than that of the new page (ToDo 1.4.c).

If you want to assume that the old page is better unless the new page proves to be definitely better at a Type I error rate of 5%, what should be your null and alternative hypotheses (H_0 and H_1)?

You can state your hypothesis in terms of words or in terms of and , which are the "converted" probability (or rate) for the old and new pages respectively.

Put your answer here.

My Hypotheses:

H_0: The old page has a higher chance of converting users if the p-value is equal or less than 5%.

H_1: The new page has a higher chance of converting visitors if the p-value is higher than 5%.

2.

Under the null hypothesis, H0 assume that p_{new} and p_{old} are equal. Furthermore, assume that p_{new} and p_{old} both are equal to the converted success rate in the df2 data regardless of the page. So, our assumption is:

$p_{new} = p_{old} = p_{population}$

In this section, you will:

Simulate (bootstrap) sample data set for both groups, and compute the "converted" probability for those samples.

Use a sample size for each group equal to the ones in the df2 data.

Compute the difference in the "converted" probability for the two samples above.

Your interpretation is not wrong however if we want to assume that the old page is better unless the new page proves to be definitely better at a Type I error rate of 5%, In this scenario:

- Null hypothesis (H0): The old page is better or equally effective compared to the new page.
- Alternative hypothesis (H1): The new page is definitely better than the old page.

heck the instructor's explanation for each hypothesis from this video: Setting Up Hypothesis Tests.

All statistical numeric values are calculated correctly.
Tip: Students can optionally attempt the classroom quizzes to ensure they are calculating the right value in many cases.

Conclusions should include both - statistical reasoning and practical reasoning for the situation.

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