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Analyze A/B Test Results

REVIEW

HISTORY

Meets Specifications

Great work really

Well-commented and formatted code along with correct interpretations, you did a great job here. you seem now mastered course concepts and lessons. AB test is very common among testing methodologies, especially in E-Commerce and Webpage optimization .

Congratulations 🏆

Code Quality

All code cells can be run without error.

- All code cells run without error. 🙌

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

- Well-formatted code, consider adding more comments to enhance your code readability and maintainability.
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about running the 10000 simulations, 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, have a look here for further discussion [How do I move away from the "for-loop" school of thought?](#) for example :

```
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
```

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.

- **[Awesome]** Part III (e) : well-done stating the hypotheses 🙌, notice, the regression model is set up as a two-tailed or two-sided test, whereas in Part II it was a one-sided test, more clarification here [What are the differences between one-tailed and two-tailed tests?](#)
- **[Awesome]** Part III (h) : really good creating additional columns, that was little tricky, rarely seen student figures out the difference between question [g] & [h], well-done 🙌

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.

- **[Awesome]**: Well-done calculating p-values using bootstrapping and `proportions_ztest` 🙌

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

- **[Suggestion]** Part III: I won't mark this as requires changes, you did really great, however, remember, your goal is to work through this project to help the company understand if they should implement the new page, keep the old page, or perhaps run the experiment longer to make their decision; ie your answers should include both - statistical reasoning and practical reasoning for the situation., so, at the end of your analysis, draw a final general conclusion as a professional data scientist, whether you think the company should implement the new page, stick to the old one, or extend the test duration according to different testing methods used in this analysis

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