UDACITY

PROJECT

Design an A/B test

A part of the Data Analyst Nanodegree Program

PROJECT REVIEW

NOTES

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Meets Specifications

Dear student,

you made it! We had quite a journey here, this exam is conceptually complex and demanding. Thanks for teaming up in this project.
I really hope this hard work helped you gather a practical knowledge and understanding of the many concepts involved in A/B testing and deal with the complex and challenging decision nodes involved in designing experiments and in interpreting results.

Congratulations on passing your exam!

Metric Choice

A good set of metrics have been selected for the experiment, without missing any necessary or valuable metrics.

Each metric has a clear and well-reasoned explanation of why it was or was not chosen as an invariant metric and as an evaluation metric.

The report clearly states what results we look for in order to launch the experiment and the stated results are aligned with the experiment goals.

Variability

The standard deviations for all evaluation metrics have been correctly calculated.

Each evaluation metric has a clear and correct explanation of whether the analytic variability is likely to match the empirical variability.

Sizing

The number of pageviews given is correct given the students choice of whether to use the Bonferroni correction.

A well-reasoned argument about how risky the experiment will be is made and a fraction of traffic to divert is chosen accordingly.

The duration of the experiment is correctly calculated given the fraction of traffic to divert that was chosen.

Sanity Checks

The sanity checks have been correctly calculated for all chosen invariant metrics.

The passing or failure of all sanity checks have been evaluated. If sanity checks failed, analysis has been performed to discover why the sanity checks may have failed and the experiment has not been continued.

Effect Size Tests

Correctly calculated confidence intervals have been reported for the difference in all evaluation metrics.

Statistical and practical significance have been correctly reported for all evaluation metrics.

Sign Tests

P-value and statistical significance have been correctly reported for all evaluation metrics.

Results Summary

The report provides good justification for the choice of whether to use the Bonferroni correction.

Correct: Our actual risk is that we might reject some metrics by mistake, and that is a type II error. The Bonferroni correction is designed to avoid type I errors when, out of many, it is sufficient that one metric meets the criteria in order to launch. It is useless in cases like ours where, out of many, we need all the metrics to meet criteria in order to launch.

A well-reasoned and plausible explanation for each discrepancy between the effect size tests and the sign tests has been provided.

Recommendation

A recommendation is made that is well-reasoned and supported by the data.

Follow-Up Experiment

A plausible experiment that would be worth testing has been made. A hypothesis for results of the experiment is clearly stated.

The metrics chosen in the report will be sufficient to evaluate the hypothesis of the experiment, would be possible to measure under most infrastructures, and are well-supported by reasoning in the report.

The report describes a reasonable unit of diversion and gives good support for this choice.

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