Template Format

This template can be used to organize your answers to the final project. Items that should be copied from your answers to the quizzes should be given in blue.

Experiment Design

Metric Choice

Invariant Metrics Selected:

Number of cookies - Invariant Metric
Number of clicks - Invariant Metric
Click-through probability - Invariant Metric

Evaluation Metrics Selected:

Gross Conversion - Evaluation Metric
Retention - Evaluation Metric
Net Conversion - Evaluation Metric

Explanation for invariant Metrics:

Before discussing the reasons for selecting the following invariant metrics, it is important to understand the goal of the study. The business goal here is to ensure that students are not frustrated after enrolling in the free trial and end up leaving the course. Thus, it would allow not only for the students's experience with audacity but also ensure that each enrolled student gets proper attention from the coaches.

Keeping in mind these goals I selected the above metrics as invariant that is to say they won't change over the control or experiment group.

- I selected number of cookies, number of clicks and click through probability as invariant simply because the change we are testing does not really affect the usability of free trial button, the users who view the course overview page or the click through probability of free trial button.
- Simply, put the experiment is designed to look at the overall conversion from starting free trial to proceeding to checkout and later completing the course.
- If the number of users who went on from going to free trial to checkout to course completion is more after the change is introduced, the experiment can be said to be successful.

Explanation for Evaluation Metrics:

- gross conversion for the simple fact that the screen is shown just before clicking the free trial and proceeding to checkout. Thus, this becomes one of the important metrics to be considered for evaluation.
- You would later also want to track the users who went on to make the first payment and did not cancel on their subscription midway through the free trial. This is important as you are already letting them know the hours they wish to commit by letting only users who indicated atlas 5 hours a week proceed to the checkout.

- gross conversion simply tracks a user to the checkout, but the net conversion looks at the entire set of operation, which includes from clicking on free trial, checkout,completing the trial period and finally making the first payment.

All the above have a direct relation to the feature we are testing and hence become candidates for evaluation metric.

Measuring Standard Deviation

For measuring standard deviation i used p(1-p)/n where n is 5000 and p values are obtained from baseline values

Standard deviation for my metrics are
Gross Conversion: 0.0057
Retention:0.0070
Net Conversion:0.0044

Sizing

Number of Samples vs. Power

I decided to use Bonferroni's correction and divided alpha by 3 for this case.
The page views required were 8,327