Fitness Test Influence on the Purchase Rate

Prepared for Musclehub Fitness Club

A/B Test Description

Musclehub Fitness Club had a hypothesis that the fitness test intimidated some prospective members, so that they didn't apply for a membership after taking such a test.

Currently, when a user considers buying a membership, they follow the steps:

- Take a fitness test
- Apply for a membership
- Pay for the first month of the membership

For the A/B test, visitors were randomly assigned to one of two groups:

- Group A will still be asked to take a fitness test with a personal trainer
- Group B will skip the fitness test and proceed directly to the application

Data Set Description

The test had been running for about 2 months and included 5K visitors which were equally divided into two groups as shown in the picture below:
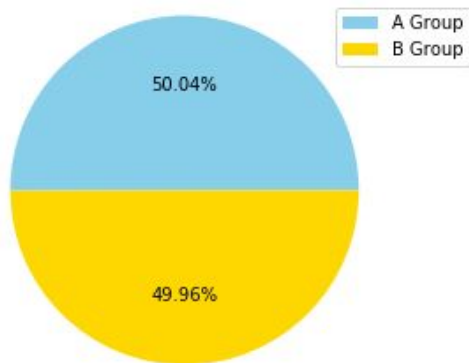
A/B Test Summary

I've calculated the application rate and the purchase rate per each group of users. As we see in the pictures below, group B, the one that skipped the fitness test, was more likely to apply for a membership and then to purchase the first month. While group A, the one that took the fitness test, was more likely to purchase once applied.
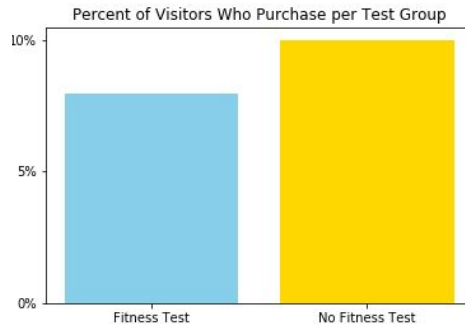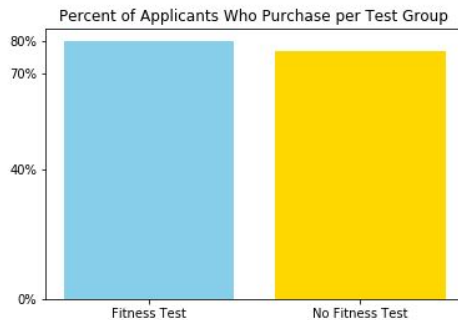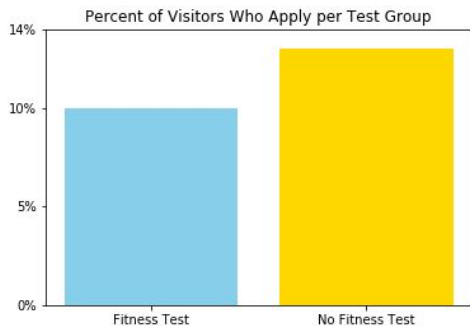
Before making any conclusions we need to check if our test results are significant.

A/B Test Significance

Since we have 2 independent data sets: one for a Fitness Test group (A) and another for a No Fitness Test group (B) - I decided to use the 2 sample test model to prove the A/B test significance.

I've run three significance tests to determine if the A/B tests results are significant for each state: application to visits rate, purchase to application rate and purchase to visits rate.

Based on the significance tests results, taking the fitness test has really decreased the application rate and the purchase rate in general - the difference in conversion rates for two groups turned out to be significant. Once applied though, both groups are equally likely to purchase their first month, so the purchase rate among applicants has not been affected by the fitness test.

Qualitative Data Summary

We also did a small survey among our customers that showed us that 3 out of 4 people didn't sign up for a membership in a fitness club because of the fitness test. Below is the summary of the responses:

- 1 person didn't apply for a membership in another fitness club because of the fitness test alone
- 1 person found the equipment in Musclehub dirty and also had a bad experience with the fitness test in another club
- 1 person regretted taking the fitness test in Musclehub
- 1 person liked the fitness test in Musclehub

Recommendations

Based on the test results, some prospective members are really intimidated by the fitness test and don't apply for a membership, which leads to less purchases in general.

So, my recommendations are:

- Don't offer a fitness test to people before they apply for a membership
- Inspect the cleanliness in the club and if needed hire more personnel to keep it all clean