

MuscleHub A/B Test Data Analysis Project

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Introduction

Owners of gym facility MuscleHub want to determine the effectiveness of offering prospective membership clients a fitness test with a personal trainer and how that impacts membership purchase rates compared to prospective members who do not participate in the fitness test.

This pie chart shows the percentage of participants that were designated to group A (received fitness test) and those designated to group B (did not receive fitness test).

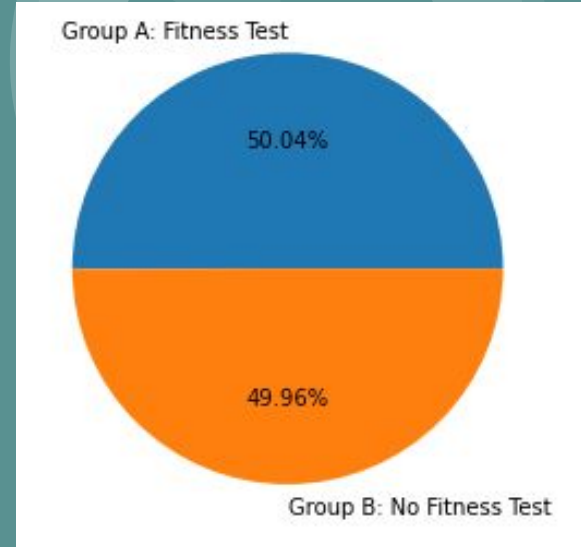


Chart #1: Comparison of participants in Group A vs Group B

Funnel Metrics

The sign-up process at MuscleHub has the following steps:

1. Take a fitness test with a personal trainer (only Group A)
2. Fill out an application for the gym
3. Send in their payment for their first month's membership

We have the necessary data to determine how many people from each group moved on from the first step to the second and third steps.

How many visitors filled out an application?

From the collected data, a higher percent of individuals from group B filled out an application form for the gym than group A.

To determine if this difference is significant, the chi squared statistical test can be used.

With a p value of 0.00096, this result is less than 0.05 meaning that the difference between the two groups is significant.

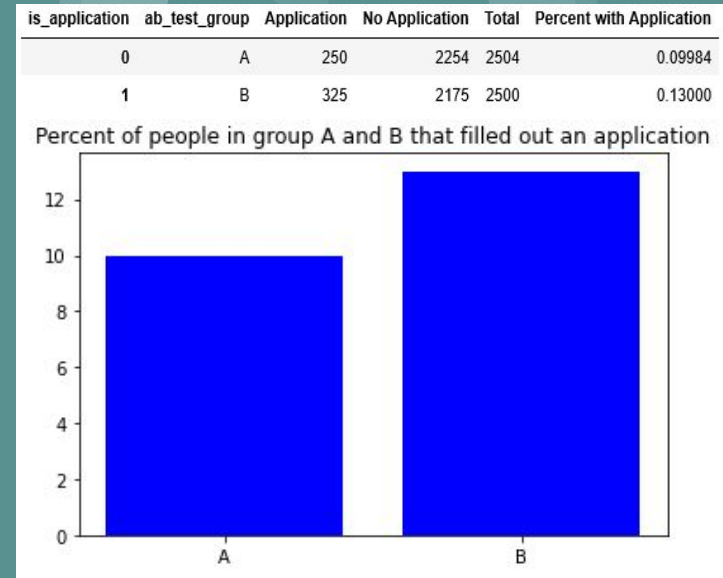


Chart #2: Comparison of percentage of people filling out an application in Group A vs Group B

How many applicants purchased a membership?

From the collected data, more people that picked up an application and did the fitness test purchased a membership compared to the group that did not do the fitness test.

Through the chi squared test, this difference was determined to be insignificant. But a more important statistic is how many **visitors** purchased a membership.

is_member	ab_test_group	Member	Not Member	Total	Percent Purchase
0	A	200	50	250	0.800000
1	B	250	75	325	0.769231

Percent of people picking up applications in test groups to purchase a membership

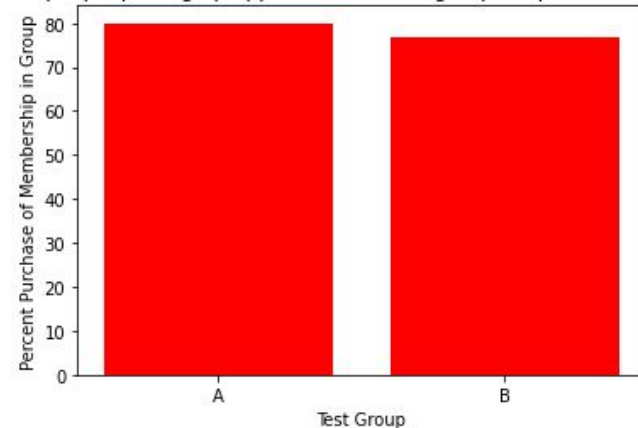
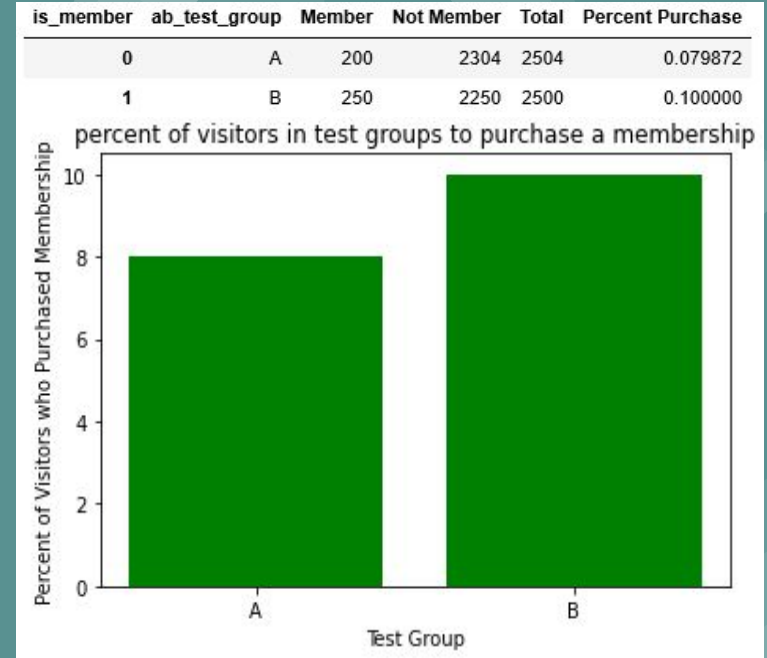


Chart #3: Comparison of percentage of people who picked up an application who purchase a membership in Group A vs Group B

How many gym visitors purchased a membership?

From the collected data, more gym visitors that did not do the fitness test ended up purchasing a membership than those who did the fitness test.

From the chi squared test, we determined this difference to be significant.



Final Recommendations

- Fitness test should be temporarily removed from being offered to visitors until better solutions found.
- Steps forward:
 - Experiment with effects of certain personal trainers on outcome of visitors purchasing a membership
 - Experiment with different workouts and intensity levels offered to visitors.
 - Ask members of this study on positives and negatives of fitness test and implement changes.
 - Offer fitness test as optional, not mandatory to select visitors.