

Capstone Project

MuscleHub A/B Test
March-2019 by Jason



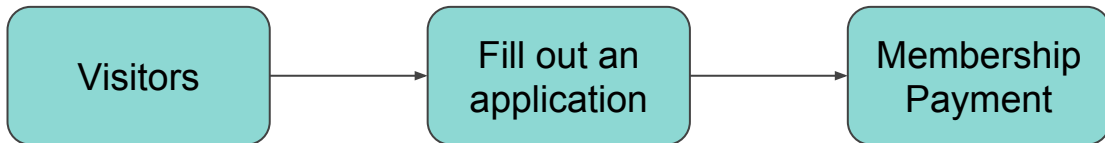
Muscle Hub A/B Test

- Muscle Hub is a fancy gym managed by Janet.
- Janet thinks that *the fitness test for new visitors intimidates some prospective members*.
- **Hypothesis:** Visitors assigned to Group B will be more likely to eventually purchase a membership to MuscleHub.
- The A/B Test is to let Janet know whether the hypothesis is true.

Group A (Current Procedure): Asked to take a fitness test with a personal trainer



Group B: Skip the fitness test and proceed directly to the application



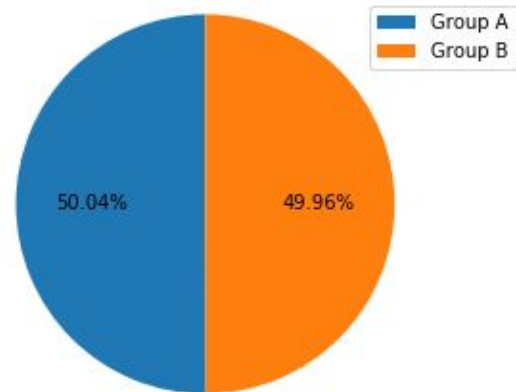


Dataset Summary

- Received 4 SQL tables from Janet
`visits`, `fitness_tests`, `applications`, `purchases`
- The datasets saved the visitors' information in each steps of the procedure from May 1 to September 9 2017.
- The test period is from July 1 2017 to September 9 2017.
- Sample Size : Total visitor is 5004.

Test Groups	Number of Visitors
A	2504
B	2500

Percentage of A and B Test Groups





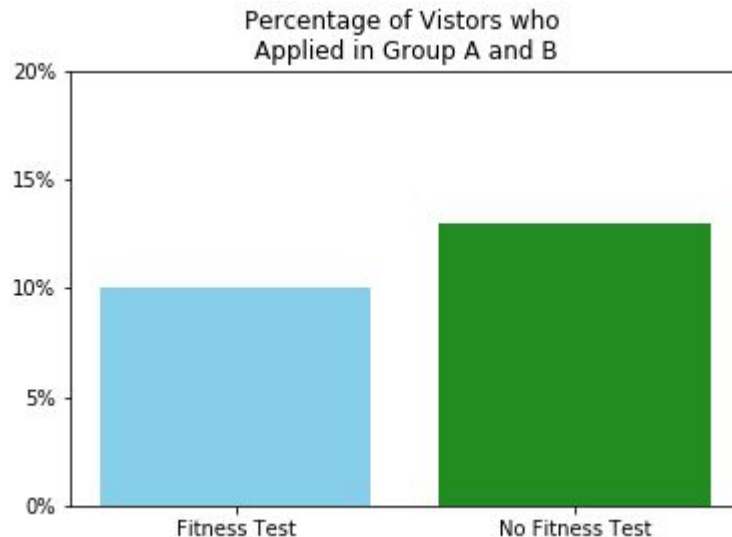
Results



Visitors who Applied

Groups	Application	No Application	%
A	250	2254	9.98
B	325	2175	13

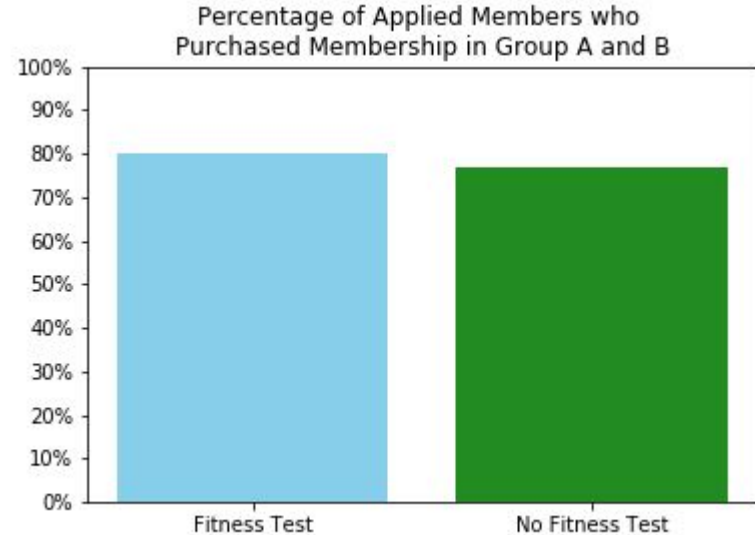
- Use chi square test to get the P-Value
- P-Value is 0.00096, Less than 0.05
- There is a significant difference between Group A and B in application process.
- Group B performed better than Group A in application process.



Applied Members who Purchased Membership

Groups	Member	Not Member	%
A	250	50	80
B	325	75	76.92

- Use chi square test to get the P-Value
- P-Value = 0.43259, Greater than 0.05
- There is no significant difference between Group A and B in signing up the membership for the person who picked up applications.
- Not able to decide which groups performed better in this test

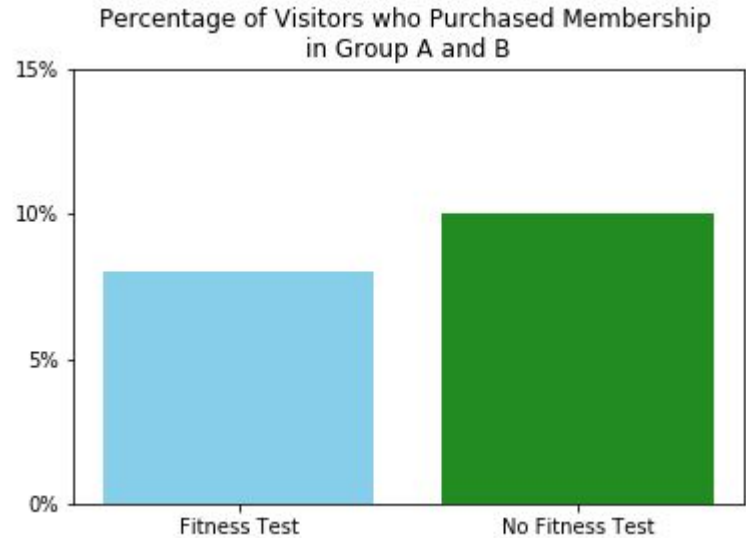




Visitors who Purchased Membership

Groups	Member	Not Member	%
A	250	2340	7.99
B	325	2250	10

- Use chi square test to get the P-Value
- P-Value = 0.01472, Less than 0.05
- There is a significant difference between Group A and B in signing up the membership.
- Overall, Group B performed 3% better in signing up the membership





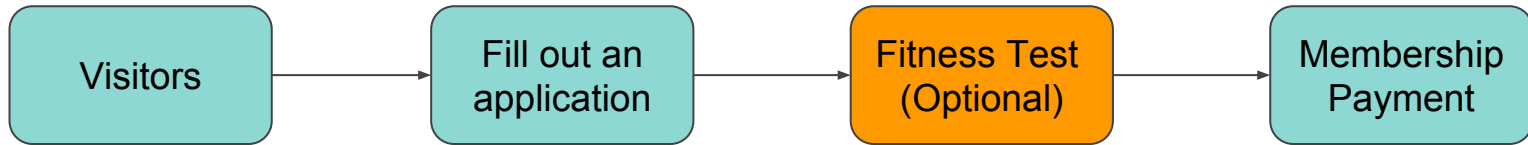
Muscle Hub A/B Test & Interviews Summary

- Taking fitness test will let fewer people fill out application, which cause less visitors convert to members.
- After the visitors complete the applications, taking fitness test has no significant effects on the number of purchasing membership.
- Some visitors did think no fitness test let them feel welcome and create a friendly environment for Muscle Hub.
- think the test will let them be motivated and confidence.



Recommendation

Recommended Procedure: Fitness Test become an optional step in new procedure



Our suggestion is that the fitness test become an optional step after the visitors fill out an application.

- The test result show that there is no much difference on the membership signed up rate after the visitors completed the application.
- Visitors can have the fitness test if they have high fitness goals.
- For the visitors like a casual workout, they could skip the fitness test as they want
- The change of the procedure could meet the visitors' requirements who come to gym for various purposes.