Muscle Hub Data Report

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Overview

In this report we will analyze MuscleHub, a high end gym featuring new renovations, top line professional trainers, and state of the art facilities to analyze how potential customers actually become paying ones.

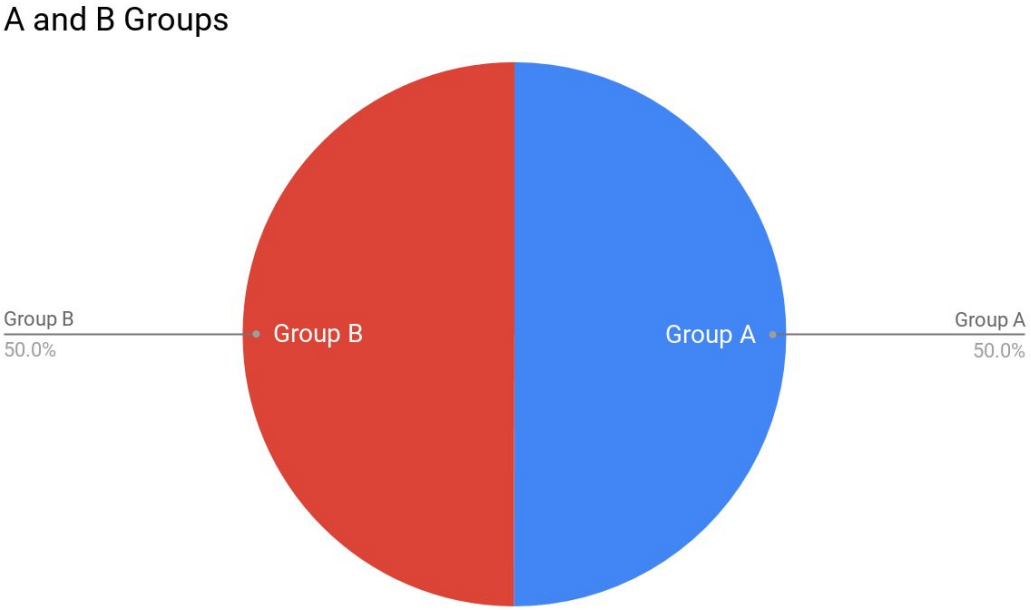
Currently, when a visitor to MuscleHub is considering buying a membership, he or she follows these steps:

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

Janet, the gym's manager, thinks that the fitness test intimidates some prospective members, so she has set up an A/B test to test her hypothesis.

Hypothesis: Visitors assigned to Group B (visitors who do not take a fitness test) will be more likely to eventually purchase a membership to MuscleHub.

A and B Groups



A = Visitors who took a fitness test
B = Visitors who did not take a fitness test

Which visitors filled out an application for the gym?

- Of the 5004 Visitors to Muscle Hub only 575 visitors filled out an application. This is only 11.5%
- Group A Visitors (those who took a fitness test with personal trainer) were less likely to fill out an application. Only 9.9% of visitors accomplished this while 13% of visitors who opted not to take a fitness test ended up filling out an application.
    - Findings:
        i. For Group A visitor's, I believe less of them ended up filling out an application because
            - They were unimpressed with the physical trainer assisting them or might not have liked them personally
            - They were surprised to see that they were fit and did not feel the need to spend money on an upscale gym
        ii. For All Visitors, I believe that some might not have like the physical layout, workout machines, or demographic of people at the gym

Lets test why visitors did not sign up

Deciding on a Test: We will use the Chi Square Test to see if there is any statistical differences in our groups of visitors. We are using this because we have two categorical datasets that we want to compare to determine whether there is a significant difference between the expected results and the observed results.

Test 1: Visitors who fill out an application v. those who do not

Test Results: We have a p-value of 0.00096 meaning we can reject the null hypothesis

Chi Square Tests

Test 1: Visitors who filled out an application

Results: We have a p-value of 0.00096 meaning this is not significant

Test 2: Visitors who picked up applications and purchased memberships.

Results: We have a p-value of 0.432 which is significant. We can accept the null hypothesis

Test 3: All Visitors who purchased memberships

Results: We have a p-value of 0.014 which is not significant. We can reject the null hypothesis

Recommendation

Muscle Hub should try and keep their facilities as clean as possible and will have a high chance of signing up visitors if they do not take the fitness test as this can be discouraging to people or might make them feel uncomfortable.