

# MuscleHub A/B Test

CAPSTONE PROJECT

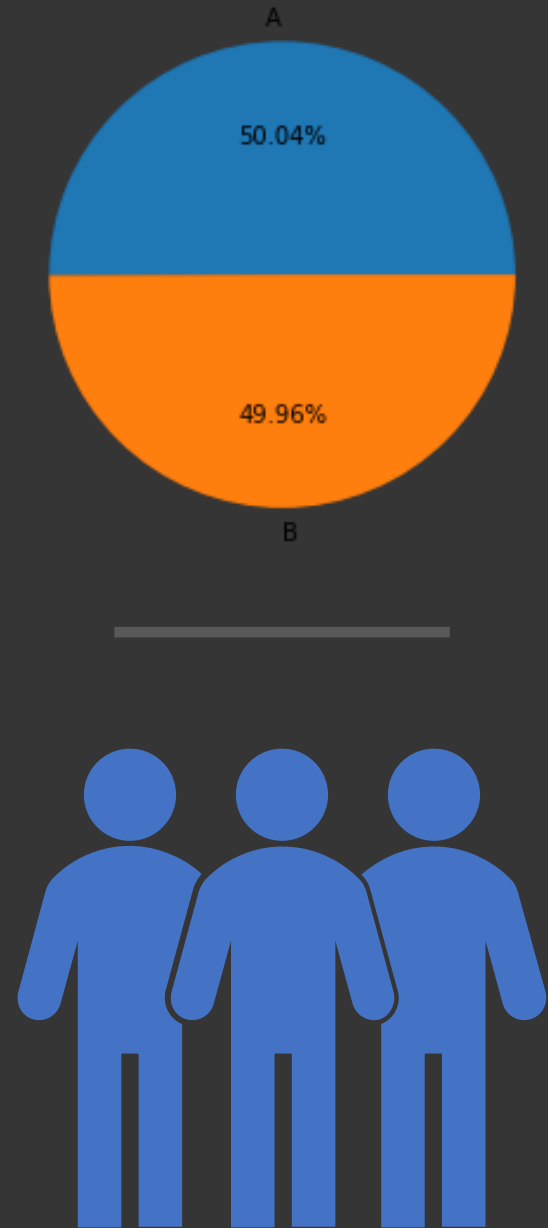
# Janet's Dilemma

Janet, the manager of MuscleHub has set up an A/B Test thinking that fitness test is intimidating to prospective customers. I've offered Janet help to figure out if Group B who skips a fitness test is more likely to eventually purchase a membership to the gym unlike Group A where everybody takes one.

To do that I've analyzed several tables provided by Janet containing data relating to visits shedding some light on potential gym customers, fitness tests touching on potential customers in Group A who were given a fitness test, applications specifying potential customers both in Group A and Group B who filled out an application and purchases providing information on customers who purchased a membership to the gym.

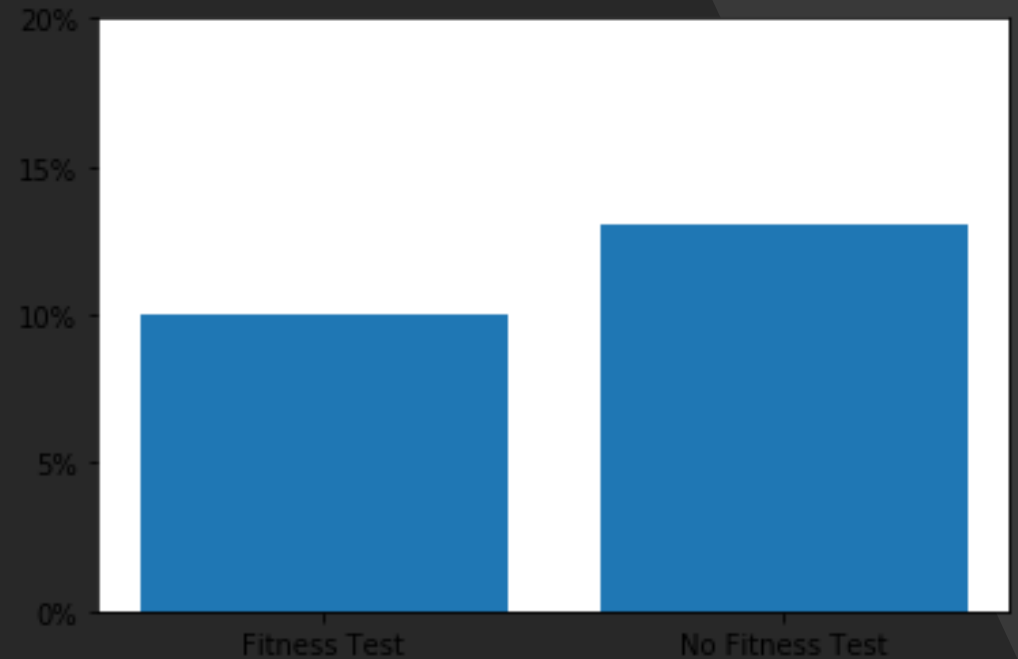
# Investigation of Group A and Group B

- Having made calculations I found out how many users were represented in each A/B Test Group. It is obvious from a pie chart that the amount is almost the same.



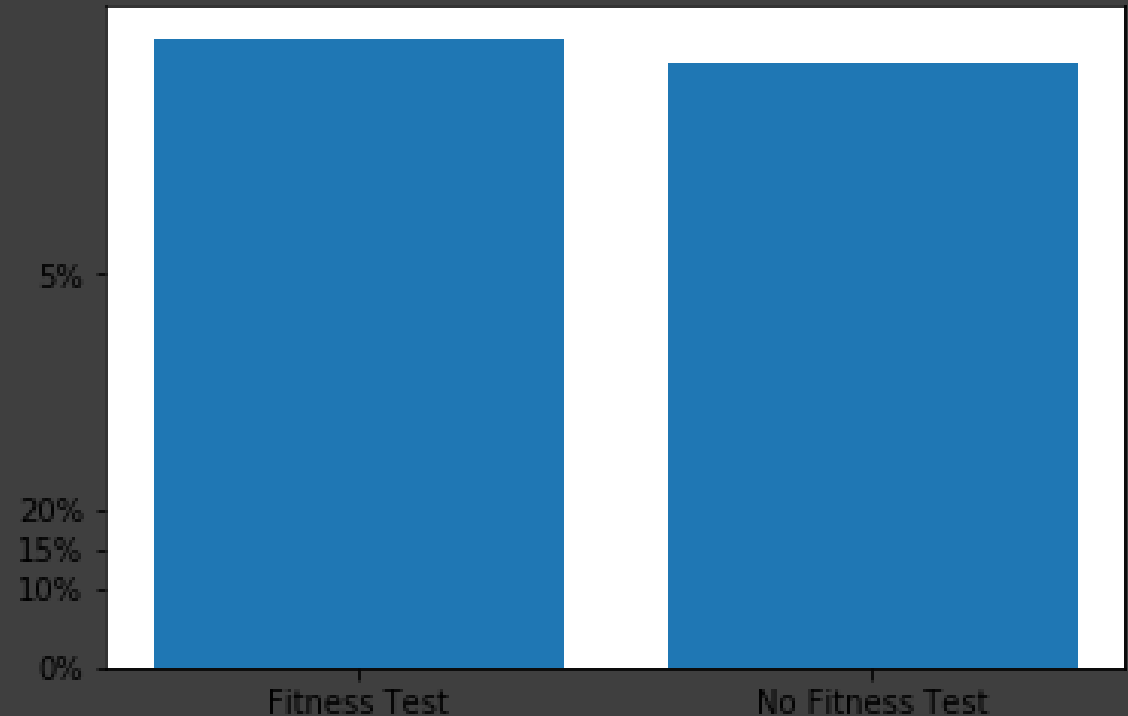
# The results of the Hypothesis Tests

- Next, I analyzed how many people actually made it to filling out an application after they took a fitness test with a personal trainer. The results revealed that it was more about people from Group B turning in an application.
- To make sure these figures are statistically significant I performed Chi Square Test, whose results indeed proved to be significant for Group B.



## Percent of People who picked up applications and purchased a membership

- Since I knew who picked up an application, the thing to be clarified was how many purchased the membership. Interestingly, that people who took the fitness test were more likely to purchase a membership if they picked up an application.
- Carrying out another Chi Square Test proved to be significant for Group B again since P-value was less than 0.5.

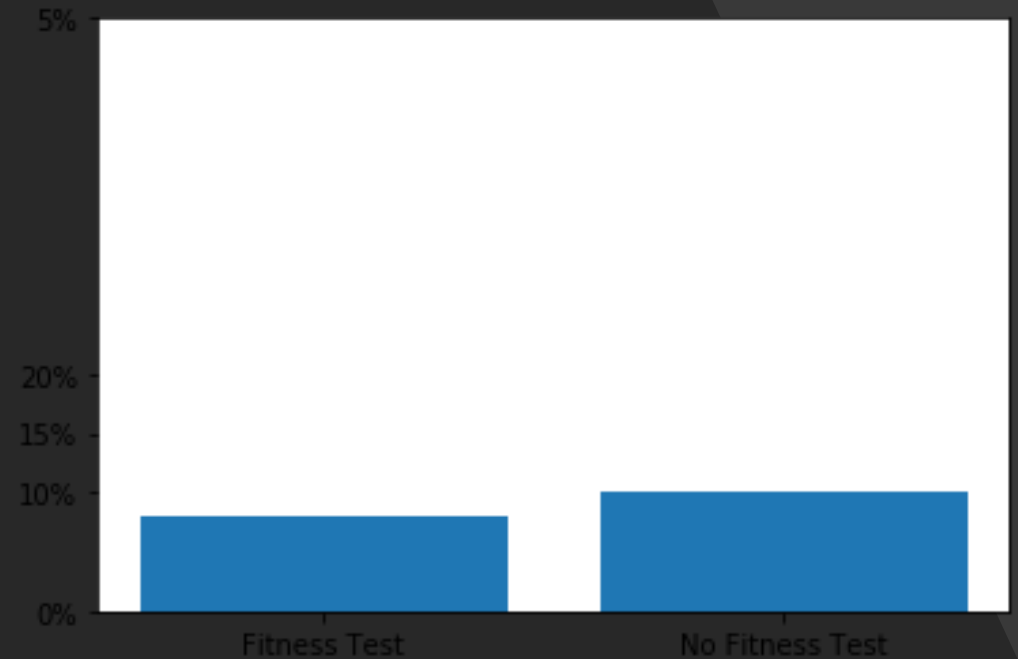


# All People who visited MuscleHub

As seen from previous slide there was no significant difference in membership between Group A and Group B. This time I considered all people who visited Muscle Hub to get the idea if the numbers were going to be significantly different between two Groups.

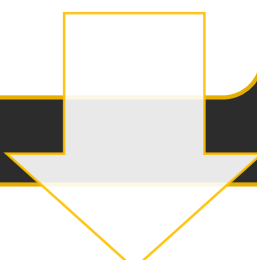


It turned out there was a significant difference in membership between Group A and Group B as you can see from the chart.



# Summarization of acquired data

Apparently, there is a certain difference between Group A, where people were given the fitness test, and Group B, where they were not at each stage of the process as reflected in the bar charts to where the first one is indicative of the percentage of visitors who apply, the second one sheds some light on the percentage of applicants who purchase a membership, and the third one gives the idea of the percentage of visitors who purchased a membership.



Without any doubt, taking a fitness test does not make a lot of sense since it has little effect on potential customer's decision of whether to purchase a membership or not. Initial Janet's hypothesis about likelihood of the fact that people from Group B stick with the idea of purchasing the membership proved to be absolutely right.

# Recommendations for MuscleHub

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- My advice for MuscleHub would be to make taking a fitness test an optional thing to be available to a potential customer upon request only since figures revealed speak mostly in favor of those who'd rather prefer to fill out an application and opt for an immediate purchase of a membership to the gym.