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MUSCLE HUB AB TEST

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

- Take a fitness test with a personal trainer
- Fill out an application for the gym
- Send in their payment for their first month's membership

Does the fitness test intimidate possible new members?

MUSCLEHUB AB TEST

To discover if the fitness test is nice or not to new visitors we proceeded with an AB test. The visitors were randomly assigned to one of two groups:

- Group A was still asked to take a fitness test with a personal trainer
- Group B skipped the fitness test and proceed directly to the application

THE DATASET

- Musclehub has a SQLite database with tables:

index	first_name	last_name	email	gender	visit_date
0	0	Maren Manning	MarenManning@gmail.com	female	5-1-17
1	1	Annette Boone	ABoone@gmail.com	female	5-1-17

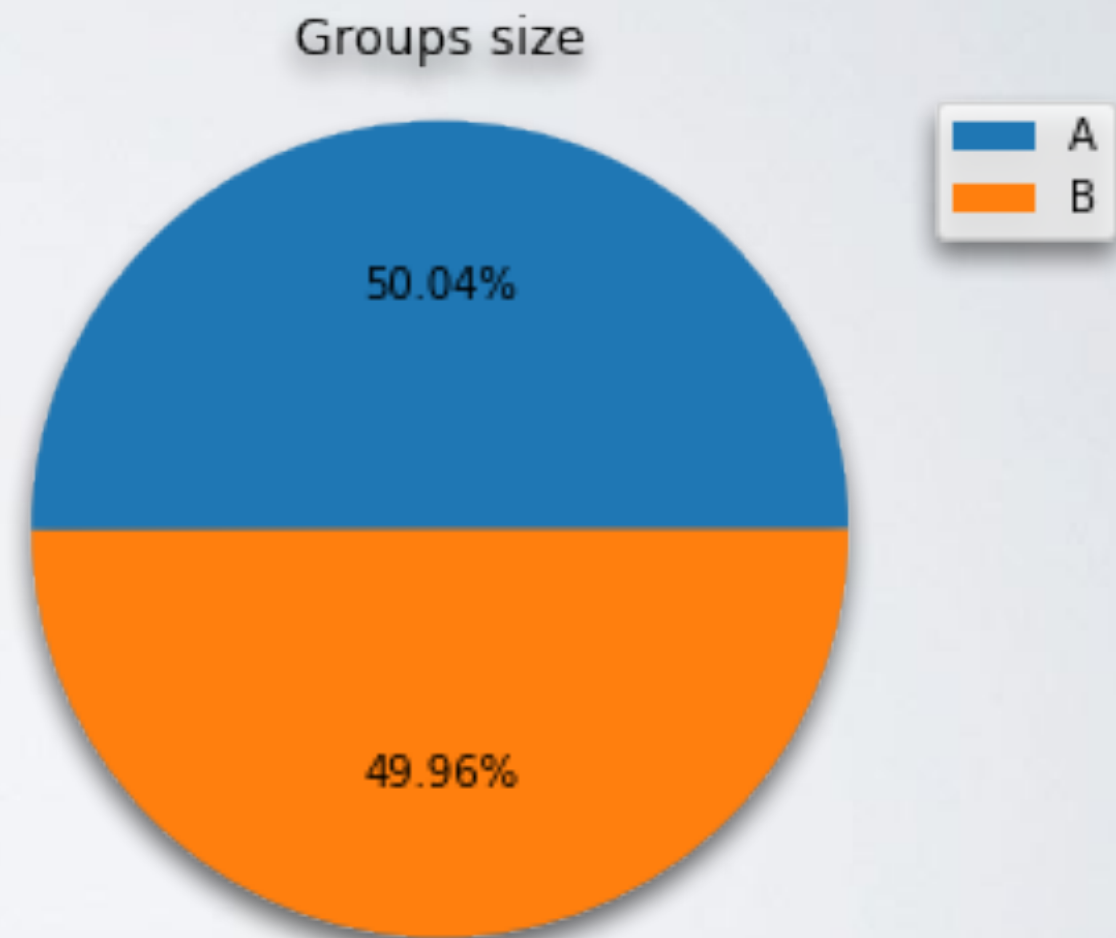
index	first_name	last_name	email	gender	fitness_test_date
0	0	Kim Walker	KimWalker90@gmail.com	female	2017-07-03
1	1	Tom Webster	TWebster@gmail.com	male	2017-07-02

index	first_name	last_name	email	gender	application_date
0	0	Roy Abbott	RoyAbbott92@gmail.com	male	2017-08-12
1	1	Agnese Acovado	AgneseAcovado@gmail.com	female	2017-09-29

index	first_name	last_name	email	gender	purchase_date
0	0	Roy Abbott	RoyAbbott92@gmail.com	male	2017-08-18
1	1	Roberta Acovado	RAcovado@gmail.com	female	2017-09-16

THE DATASET

- Using Python libraries we consolidated the available information to run the AB tests.
- We picked data from 7-1-2017 that divided randomly the new visitors in two groups, A and B, evaluating 5004 visitors, evenly divided.

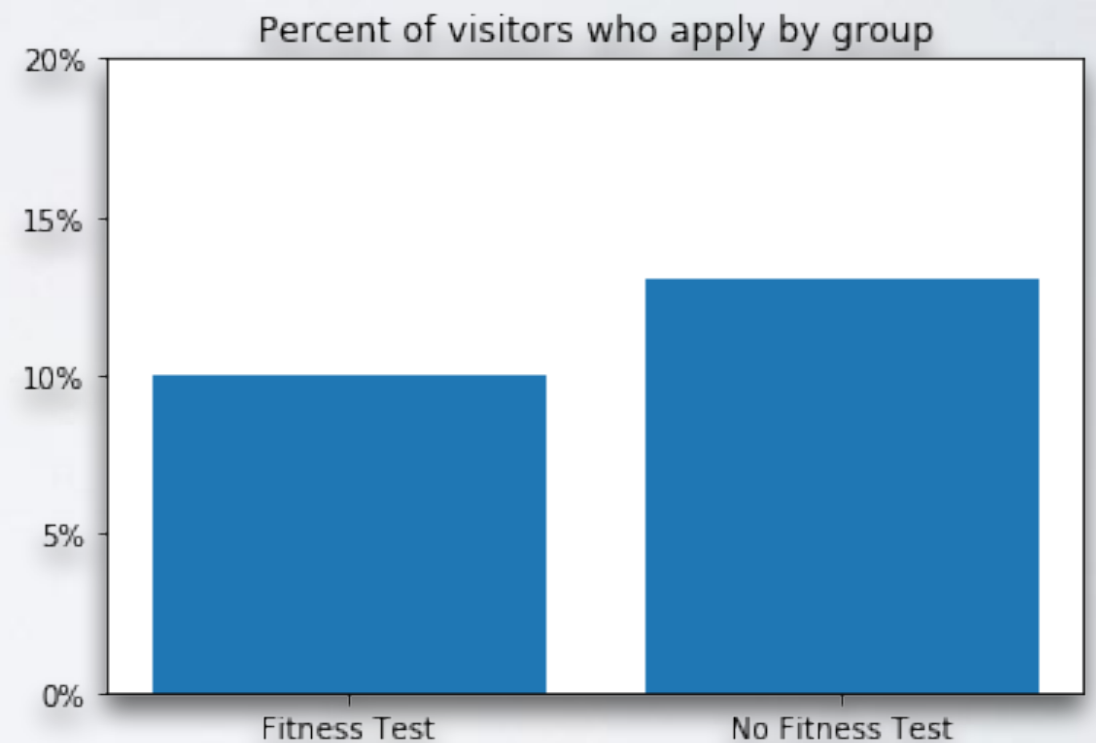


THE STATISTICAL TEST

- Working with the available data, we were able to build pivot tables dividing the data in two discrete categories, considering the groups A and B.
- Given this data characteristic the best statistical test to be made is Chi Square Test.

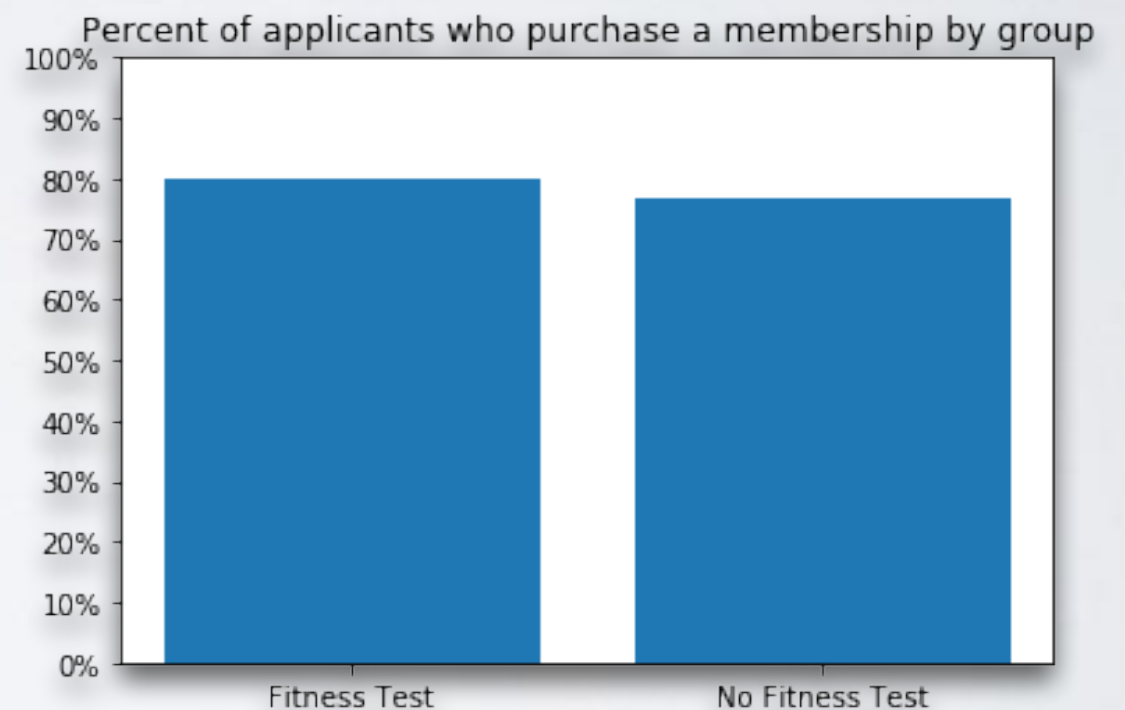
WHO PICKS UP AN APPLICATION?

- We calculated the percentage of application for each group and checked if the difference between them is significative.
- We run a Chi Square test and we got a pvalue of 0.0009, meaning that there are more chances to a person without fitness test fill the application.



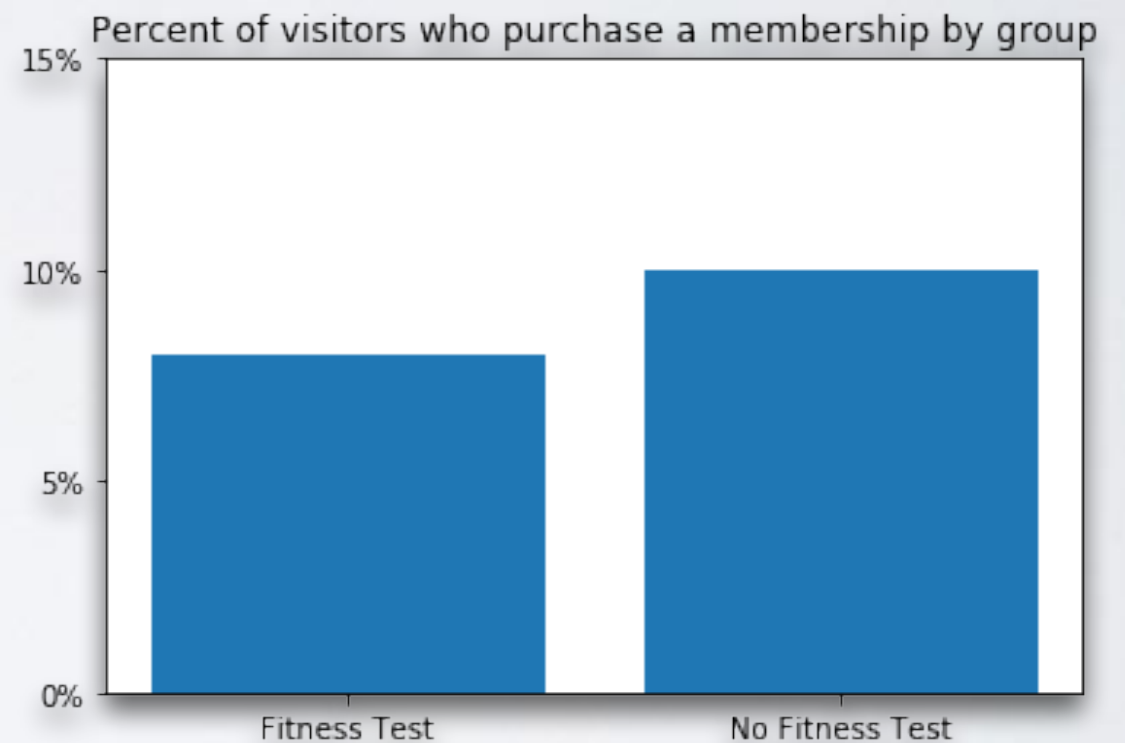
WHO PURCHASES A MEMBERSHIP?

- Of those who picked up an application, how many purchased a membership?
- We run a Chi Square test and we got a pvalue of 0.43, meaning we don't have a real difference between the groups.
- Those who fill the application has the same chance to send the payment that those who didn't.



HOW ATTRACTIVE MUSCLEHUB HAS BEEN?

- Considering all visitors, which is the best strategy to convert them to members?
- The strategy of group A convert less than group B. We run a Chi Square test and had a pvalue of 0.14, meaning the difference has significance.



WHAT IS THE VOICE OF CUSTOMER?

Most of the customer interviews give us the idea that the fitness test isn't that nice. It generally isn't appreciated by the visitor.

Now we have numbers to prove our perception.

To improve the members conversion rate Musclehub must abolish the fitness test for new visitors.