



# Muscle Hub Data Story

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# INTRO

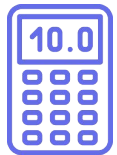
What is this data story about?



The Gym MuscleHub is A/B testing their Subscription Process. More in particular the free Fitness Test



To do so, new visitors were divided into two groups **A** & **B**



The results were tested for significance using chi square statistical test as the data is categorical (subscription yes Vs. subscription no) and there are two categorical datasets (Group A & B)



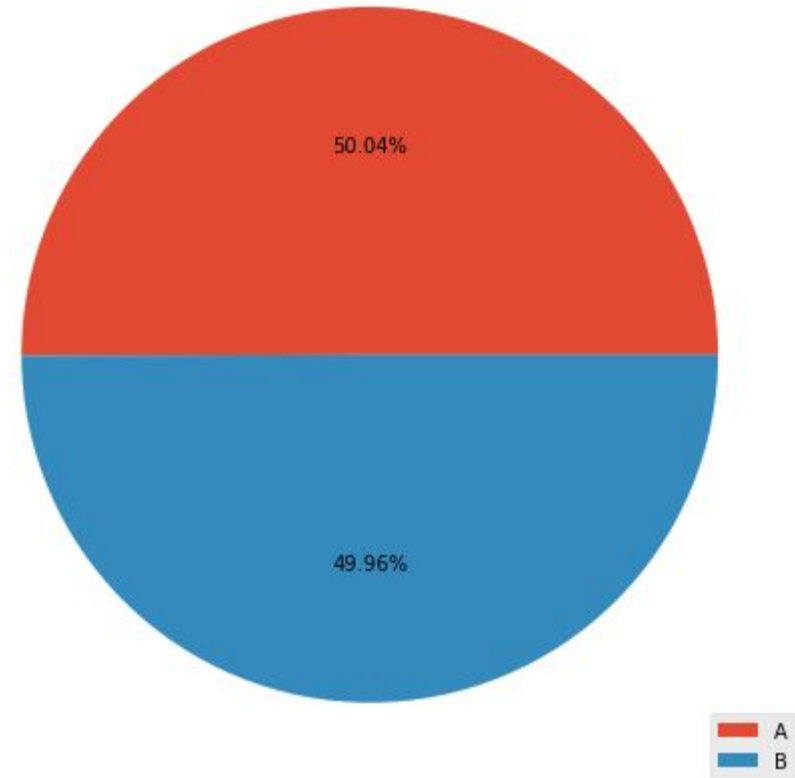
## A/B Groups

- Group B did not take the fitness test
- Group A took the Fitness test

### Demographics:

- Male: 2440
- Female: 2564

Group A vs Group B in %





# Online Feedback

## Qualitative Data



I always wanted to work out like all of the shredded people on the fitness accounts I see on Instagram, but I never really knew how to start. MuscleHub's introductory fitness test was super helpful for me! After taking the fitness test, I had to sign up and keep coming back so that I could impress my trainer Rachel with how much I was improving!

- Cora, 23, Hoboken



I took the MuscleHub fitness test because my coworker Laura recommended it. Regretted it.

- Sonny "Dad Bod", 26, Brooklyn



# 1st Funnel Step Application

- The biggest percentage of applications came from the B group (no fitness test)
- The difference was significant as proven by the chi square test results.  $p$  value  $< 0.05$

is_application	Application	No Application	Total	Percent with Application
ab_test_group				
A	250	2254	2504	9.984026
B	325	2175	2500	13.000000

```
from scipy.stats import chi2_contingency

contingency = [[250, 2254],
               [325, 2175]]

chi2_stat, pvalue, dof, t = chi2_contingency(contingency)
print('There is a significant difference as the pvalue is < 0.05: {:.5f}'.format(pvalue))
```

There is a significant difference as the pvalue is < 0.05: 0.00096





## 2nd Funnel Step

### Became member if Application

- In this step of the funnel we exclusively look at the number of visitor who did pick up an application
- Once the dataset is filtered we look at how many of these applicants became members
- The biggest percent of memberships came from the A group (**fitness test**)
- However, the results were not statistically significant as proven by the chi square test results. p value > 0.05

	is_member	Member	Not Member	Total	Percent Purchase
ab_test_group					
	A	200	50	250	80.000000
	B	250	75	325	76.923077

```
contingency = [[200, 50],  
               [250, 75]]  
  
chi2_stat, pvalue, dof, t = chi2_contingency(contingency)  
print('There is no significant difference as the pvalue is > 0.05: {:.5f}'.format(pvalue))
```

There is no significant difference as the pvalue is > 0.05: 0.43259



# Zooming Out

## The big picture

- In this slide we are looking at the conversion rate for all the visitors in terms of the 2 groups
- The biggest percent of memberships came from the B group (**No fitness test**)
- The results were **statistically significant** as proven by the chi square test results.  $p \text{ value} < 0.05$

	is_member	Member	Not Member	Total	Percent Purchase
ab_test_group					
A		200	2304	2504	7.98722
B		250	2250	2500	10.00000

```
contingency = [[200, 2304],  
               [250, 2250]]  
  
chi2_stat, pvalue, dof, t = chi2_contingency(contingency)  
print('There is significant difference as the pvalue is < 0.05: {:.5f}'.format(pvalue))
```

There is significant difference as the pvalue is < 0.05: 0.01472



## Takeaways

- Gymgoers are highly inclined to become gym members once they pick up an application (A 80% & B 76%). Note that this percentage difference is not statistically significant
- Therefore Musclehub should focus its efforts on increasing the number of applications.
- To do so we suggest to offer a non-mandatory fitness test.

