

# Musclehub Capstone Project

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# A/B test description

The **test group A** passed a fitness test prior to starting a membership.

**Membership sign-up rate: 8%**

The **test group B** didn't have a fitness test and proceeded directly to the application.

**Membership sign-up rate: 10%**

# Dataset and background

The membership process usually goes in the following order:

- 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

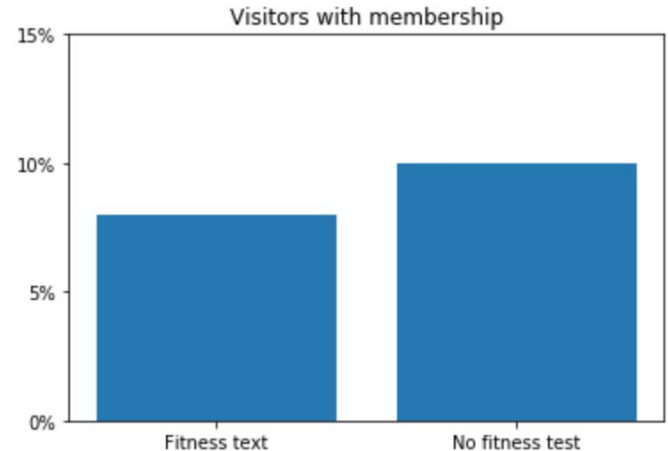
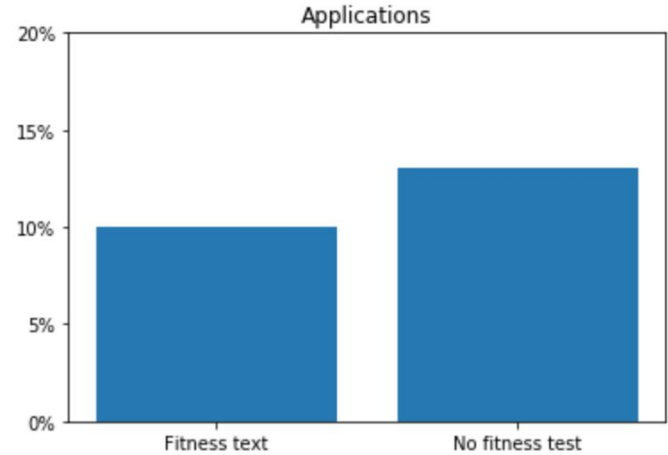
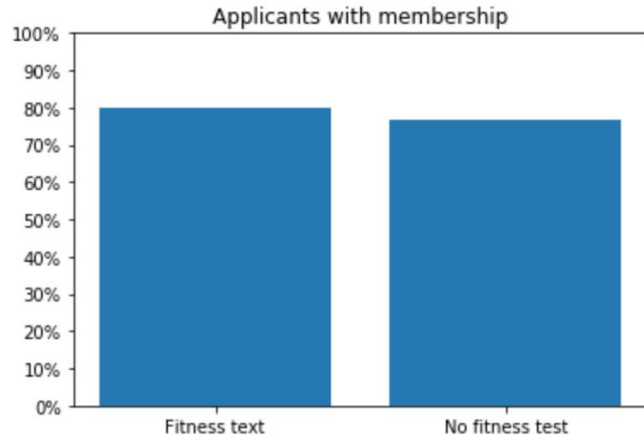
A/B test made the first step conditional depending on the test group a person was assigned to.

- The groups had roughly the same amount of people (2504/2500)
- Study period from 7/1/2017 through 9/9/2017

# Three hypothesis tests

Chi Square Test compares 2 or more categorical datasets

- 1) Visitors who proceeded with application (Applicants)
- 2) Applicants with membership
- 3) Visitors who purchased membership



# A summary of the qualitative data

- Applicants: Pvalue is 0.000964782760072

A significant difference between 2 datasets indicates that significantly more people who did not do a fitness test got an application.

- Applicants with membership: Pvalue is 0.432586460511

**no** significant difference between 2 datasets indicates that taking a fitness test did not influence people decision to get a membership once they got an application

- Visitors with membership: Pvalue is 0.168065347536

There is a low dependence on whether the fitness test influenced the membership purchase

# A recommendation for MuscleHub

- There is no particular advantage of the fitness test prior to the application, therefore, I would recommend **making the test optional** to visitors.
- There is a slight advantage of not having a fitness test when people sign up (3%). However, providing a fitness test might also get **more clients to use personal training services** at the MuscleHub. So it is beneficial to keep it optional.