MuscleHub A/B Test

Fitness Exam experiment

Fitness Exam Test

- Control Version

2,504 testees were asked to take a fitness test with a personal trainer

- B Version

2,500 testees were NOT asked to take a fitness test and proceed directly to application

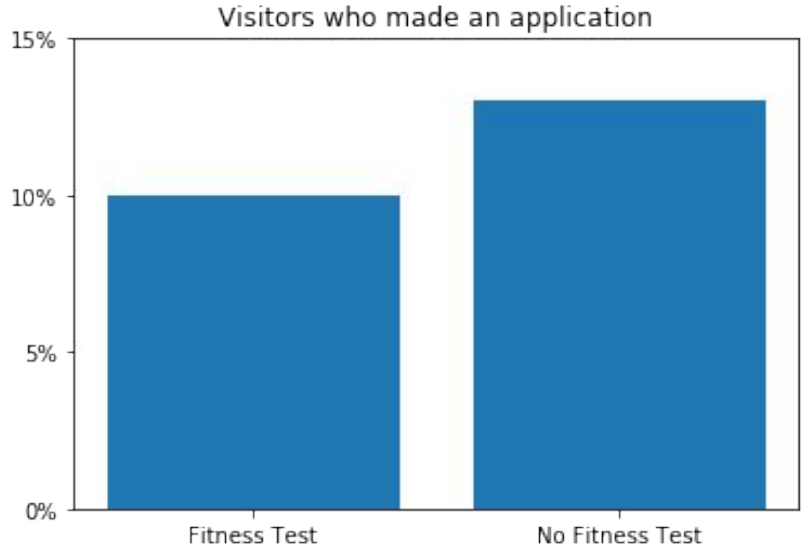
Both versions were being measured by the amount of:
1. Applications
2. Memberships purchased

Applications

- Control Version

250 out of the 2,504 applied after taking the fitness test **(9.9%)**
Top Chart

From these 250 effective applications, 50 were converted into memberships
(**80%** from applications) *Bottom Chart*

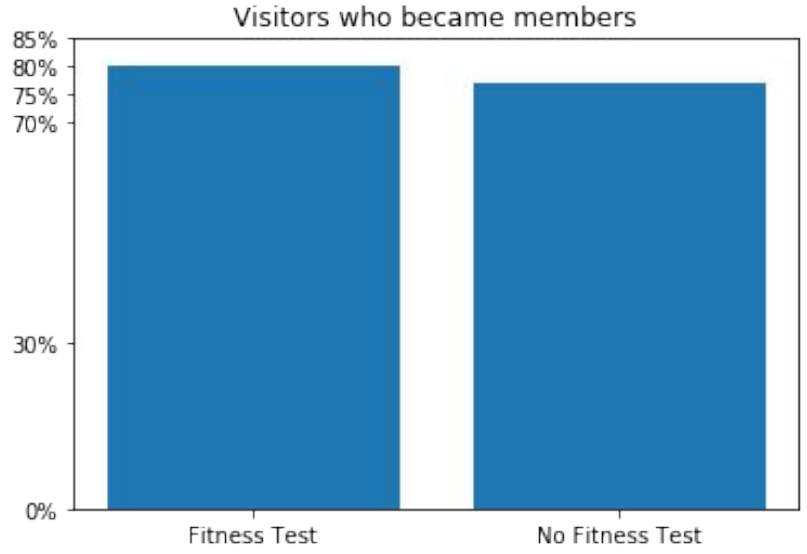


- B Version

325 out of the 2,500 applied after not taking the fitness test **(13%)**
Top Chart

From these 325 effective applications, 75 were converted into memberships

(**77%** from applications) *Bottom Chart*



Applications - Hypothesis test

- The data collected has two categorical variables:
  1 A – Took the fitness test
  1 B – Did not take the fitness test

  2 A – Did apply
  2 B – Did not apply

  A Chi-Squared Test was run over the samples to determine the level of confidence for the results. This test suits the sample due to the expected result driven from more than 2 categories

The P VALUE resultant from this comparison is 0.09%. A confident result must be below 5%.

The 3.1% delta can be trusted as a significant result in between Control VS B Version

Application Ratio over Memberships – Hypothesis Test

- The data collected has two categorical variables:
  1 A – Did apply
  1 B – Did not apply

  2 A – Did purchase a membership
  2 B – Did not purchase a membership

  A Chi-Squared Test was run over the samples to determine the level of confidence for the results. This test suits the sample due to the expected result driven from more than 2 categories

The P VALUE resultant from this comparison is 43%. A confident result must be below 5%.

Although these conversions are displaying the B Version (Without test) a surplus of 25 effective membership subscriptions, the results are deceiving due to the lack of statistical confidence

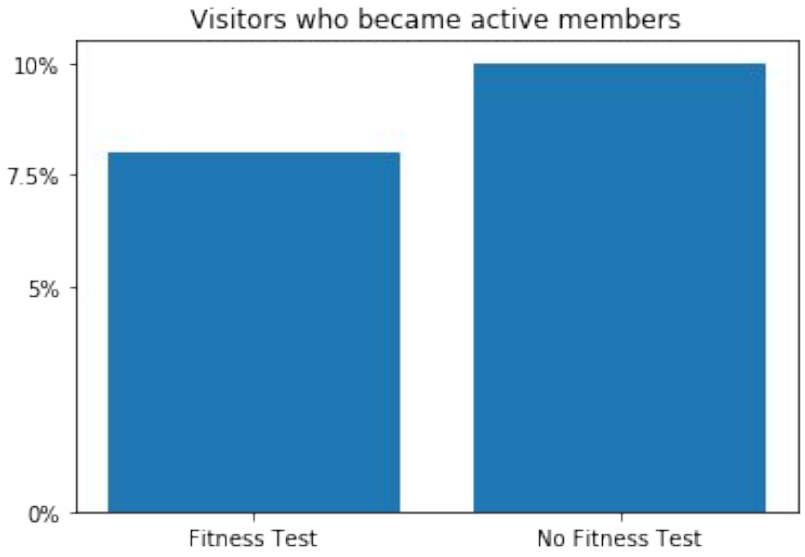
Overall Membership Purchases

- Control Version

200 out of the 2,504 purchased a membership regardless of applying after taking the fitness test **(7.9%)**

- B Version

250 out of the 2,500 purchased a membership regardless of applying after taking the fitness test **(10%)**



Overall Membership Purchase – Hypothesis Test

- The data collected has one categorical variables:
  1 A – Took the fitness test
  1 B – Did not take the fitness test
- 2 A – Did purchase a membership
  2 B – Did not purchase a membership

A Chi-Squared Test was run over the samples to determine the level of confidence for the results. This test suits the sample due to the expected result driven from more than 2 categories

The P VALUE resultant from this comparison is **1%**. A confident result must be below **5%.**

The 2.1% delta can be trusted as a significant result in between Control VS B Version

Interviews

1 (Control)

Was motivated by the test due to the little knowledge about doing workouts in a gym.

2 (B)

Was motivated by the free will of join or not without the intervention of a trainer

3 (Control)

Refused to join after taking the test.
Went to the gym because of a recommendation

4 (B)

Was motivated because of the short process to become a member

Conclusions

Fitness tests

Fitness tests proven to reduce the subscription rate by 2%. This number represent 25 subscriptions every 1,250 visitors. This test should be optional to users who ask for it.

Qualitative

Depth interviews might help to understand the reason why users who didn't purchase a membership in the Control version find the fitness test as an objection for signing up

Further experiments

There are several variables besides a fitness test that might influence the decision of a visitor to sign up or not. Taking a step back in the reason why a visitor comes over (previous experience in other gyms, recommendations…) can be a subject of testing additionally to the fitness test

Source JUPYTER NOTEBOOK