Muscle Hub Fitness
A/B Testing

Codecademy Capstone Project – Data Analysis

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Description of A/B Test

- Muscle Hub fitness would like to know if skipping the fitness part of membership recruitment will result in more or less memberships. The hypothesis is that is will result in more memberships sold.

- They perform an A/B test with a sample of people who perform the fitness test and a sample that do not.

- Results are analyzed to determine if there is a significant difference between the two approaches with regards to membership sales. Relationship between the fitness test and application and eventual purchase were investigated.
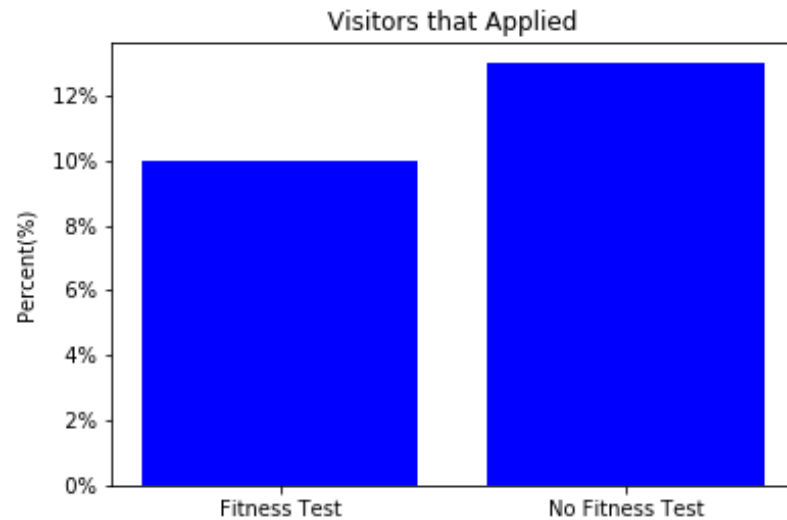
Summary of Dataset

- 5004 samples were part of the the data set
    - 2004 took the fitness test (dataset A)
    - 2000 did not take the fitness test (dataset B)

A

50.04%

49.96%

B
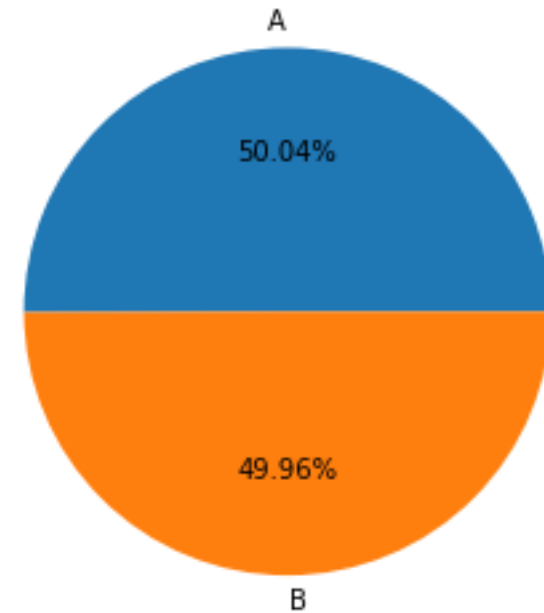
Applications

- Results showed that people were more likely to pick up an application if they did NOT take the fitness test.

- Running a Chi-squared showed that these results are **significant**.
  - P-value ~= 0.00096 < 0.05

Membership Purchase

- Results showed that people who took the test
- picked up an application were more likely to purchase membership.

Applicants that Purchased Membership
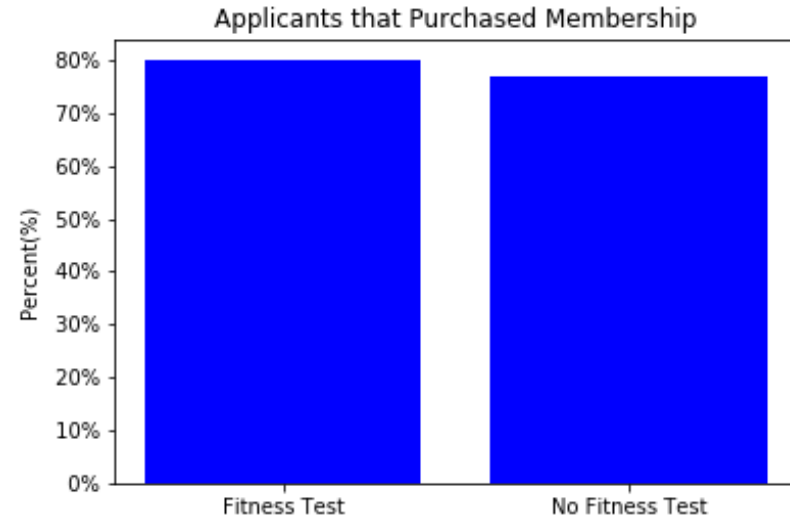
- However, running a Chi-squared test showed that these results were **not significant**.
  - P-value ~= 0.4326 > 0.05

Membership Purchase cont'd

- Overall results showed people who did not take the fitness test were more likely to end up purchasing a membership.
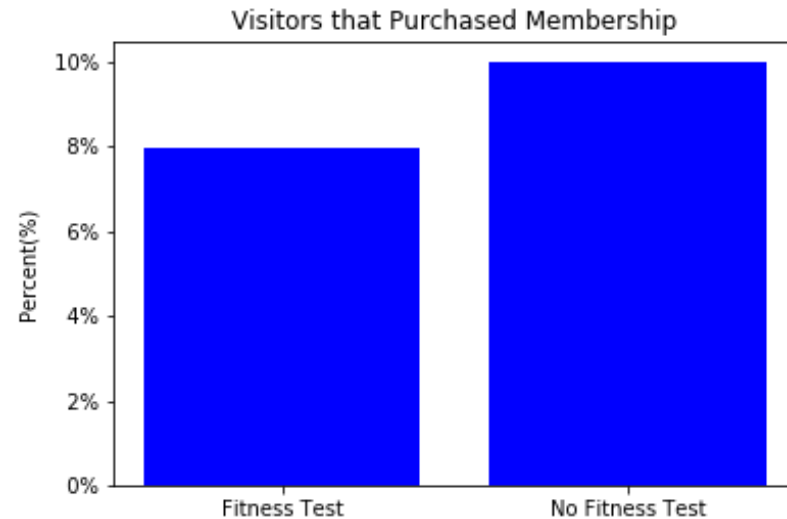
- Chi-squared showed that these results were **significant**.
  - P-value ~= 0.0147 < 0.05

Hypothesis Test

- Chi-squared Test was chosen because
    - We are dealing with categorical data
    - We needed to compare two categorical datasets
    - We needed to determine if our observed test results were significant.

Qualitative Data Summary

- Not a significant number of interviews were conducted to make too many inferences from this data

- However, overall from the reviews it would seem people are less likely to appreciate a fitness test and therefore less likely to purchase a membership

- Based on these interviews I would be form a hypothesis that skipping the fitness test will result in more membership purchases. But a formal study would be needed to test this hypothesis.

Final Recommendation

- Skip the fitness test!

- Test results support the original hypothesis. It is more likely that a person will buy a membership if the fitness test is skipped.