



# MuscleHub Capstone Project

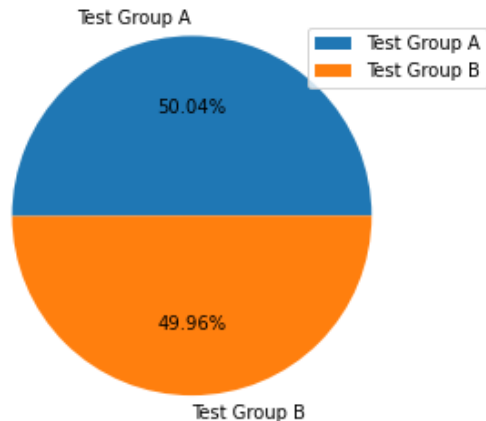
Cletus Norton

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# 1.1 Information about the data

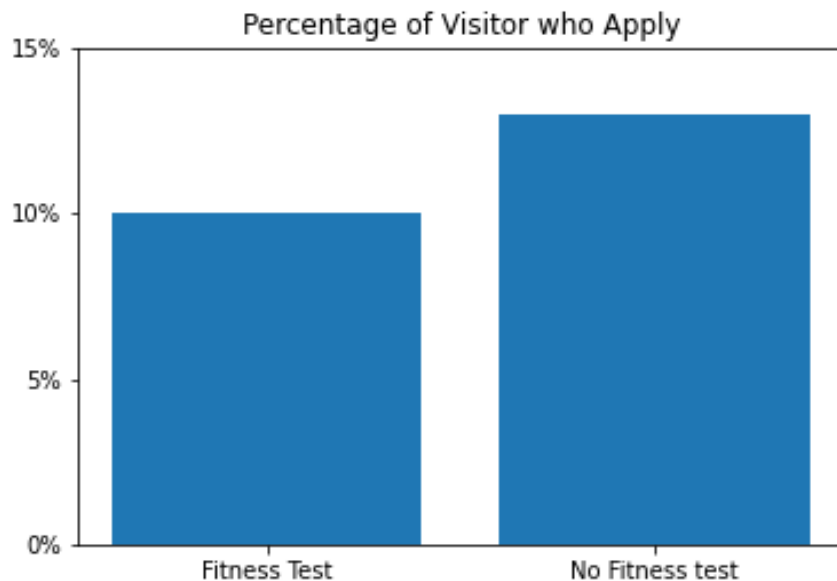
This is a capstone project for the data science path, where we are “hired” to help MuscleHub run an A/B test for perspective members. The current policy is for perspective visitors to take a fitness test with a personal trainer, then fill out the application for the gym, and finally send in their first month’s payment. Visitors were randomly assigned to either group A or group B. In group A visitors were asked to take a fitness test with a personal trainer as had been policy. In group B the visitor skipped the fitness test and proceeded directly to the application.

The dataset consists of 5,004 guest, 2504 in group A and 2500 in group B. It was not part of the project to check on gender, but it would be interesting to see if gender was a factor in membership signup in either group.



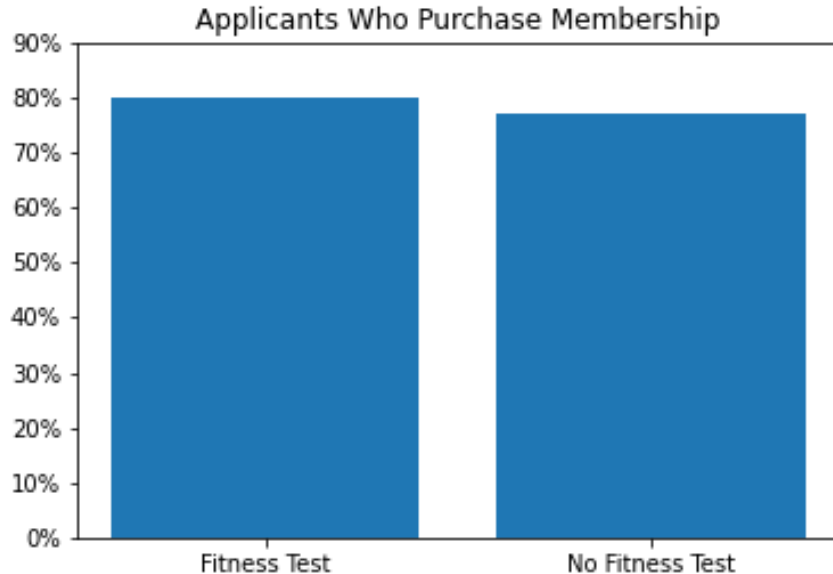
## 1.2 Visitors who applied for Membership

- Group A: 200 of the 2504 filled out the application
- Group A resulted in 9.9% success rate
- After running a Chi2 test, we received a P-value of .0009, showing a significant advantage to group B.
- Group B: 250 of the 2500 filled out the application
- Group B resulted in 13% success rate



## 1.3 Applicants who purchased a membership

- 200 of the 250 applicants in group A went on to purchase a membership.
- 250 of the 325 applicants in group B went on to purchase a membership.
- Both groups provide a high success rate of turning applicants into members.
- The chi2 test had a P-value of 0.432, so there is no significant difference at this point in the process.



## 1.4 Visitors who purchased a membership

- In group A 200 of the 2504 visitors purchased a membership.
- In Group B 250 of the 2500 visitors purchased a membership.
- This result shows a 7% membership in group A and a 10% membership in group B.
- Running a chi2 test results in a P-value of 0.014 which implies there might be a significant advantage by switching policy.



## 1.5 Final analysis

In summery, we observed that a higher and significant percentage of visitors who did not take the fitness test filled out an application. The next step in the process showed no significant difference in which group a visitor started in as far as paying for the membership. The most important aspect of the process shows there is a significant difference in those who purchased a membership if they didn't take the fitness test. It would be my recommendation that MuscleHub stop having visitors start with a fitness test.