MuscleHub A/B Test

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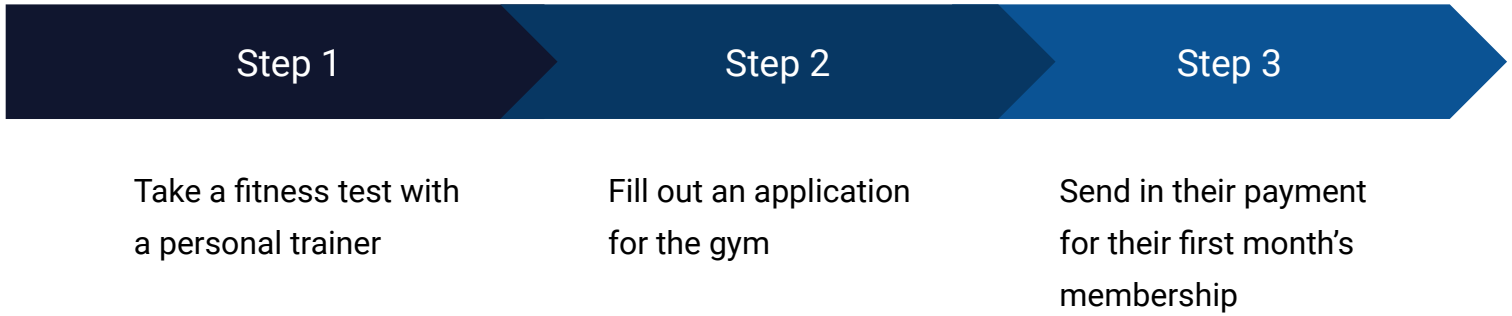
1. Objective

1.1 Introduction

MuscleHub, a fancy gym, wants to run an A/B test. Currently, when a MuscleHub visitor purchases a membership, they follow the following steps:



Janet, the manager of MuscleHub, thinks that the fitness test intimidates some prospective members, so she has set up an A/B test.

1.2 Test Process

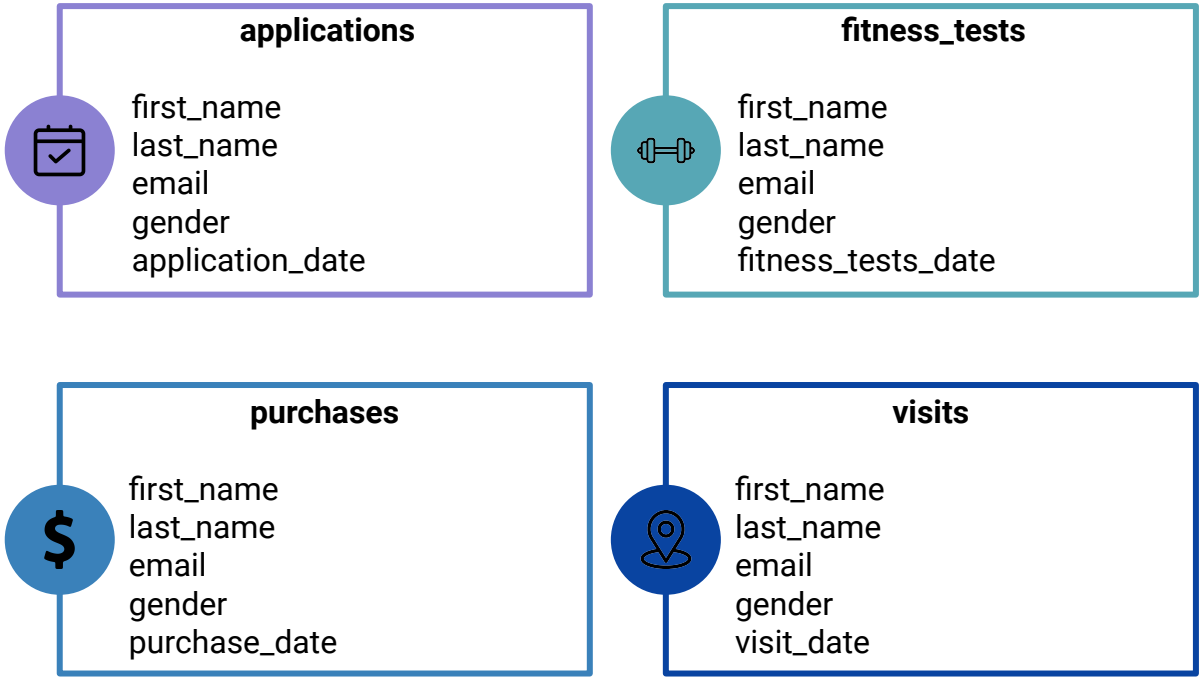
Visitors are randomly assigned to one of two groups:

- Group A is still asked to take a fitness test with a personal trainer.
- Group B skips the fitness test and proceed directly to the application.

Janet's hypothesis is that visitors assigned to Group B will be more likely to eventually purchase a membership to MuscleHub than visitors assigned to Group A

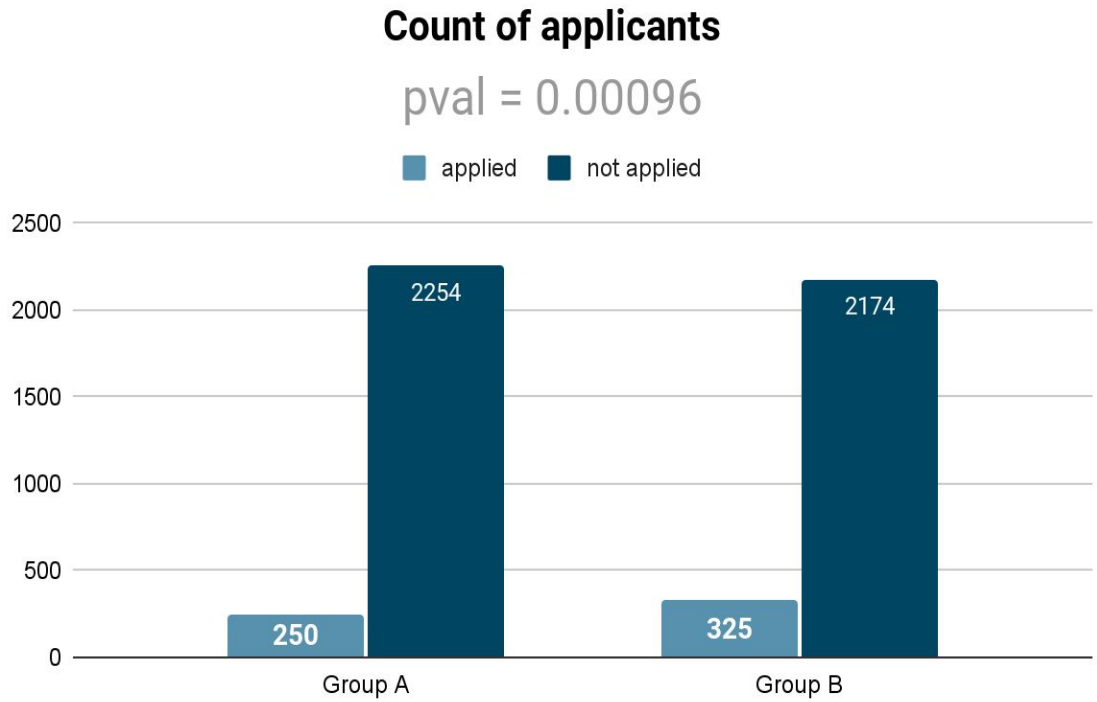
2. Data Summary

2.1 Available tables



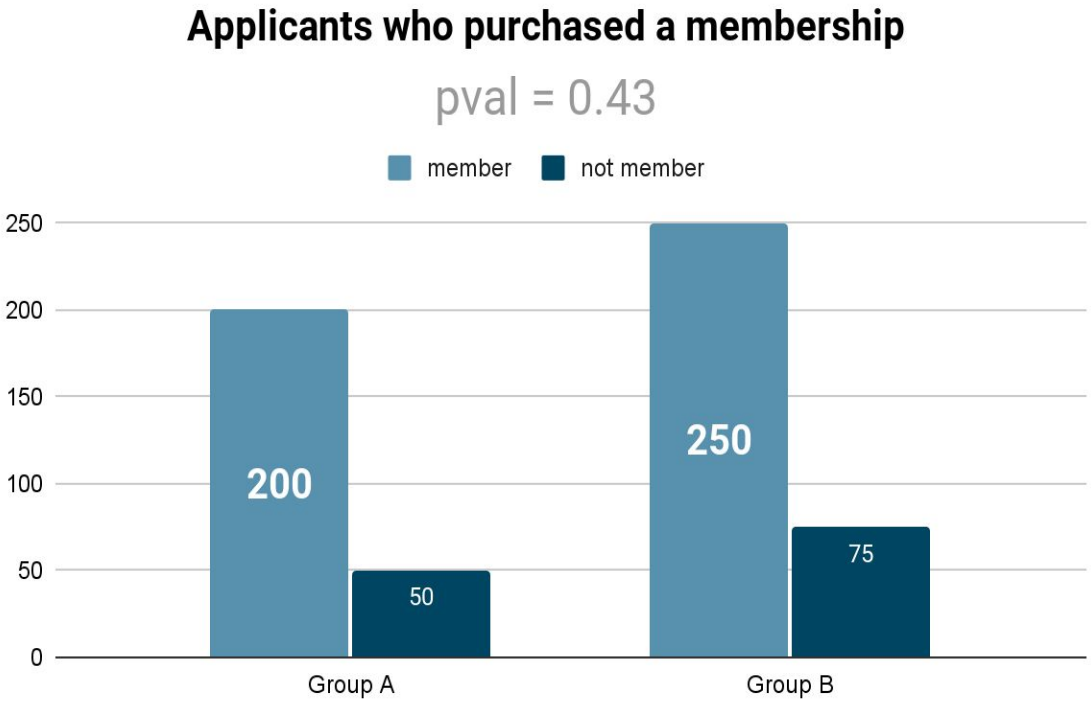
3. Hypothesis Testing

3.1 Count of applicants



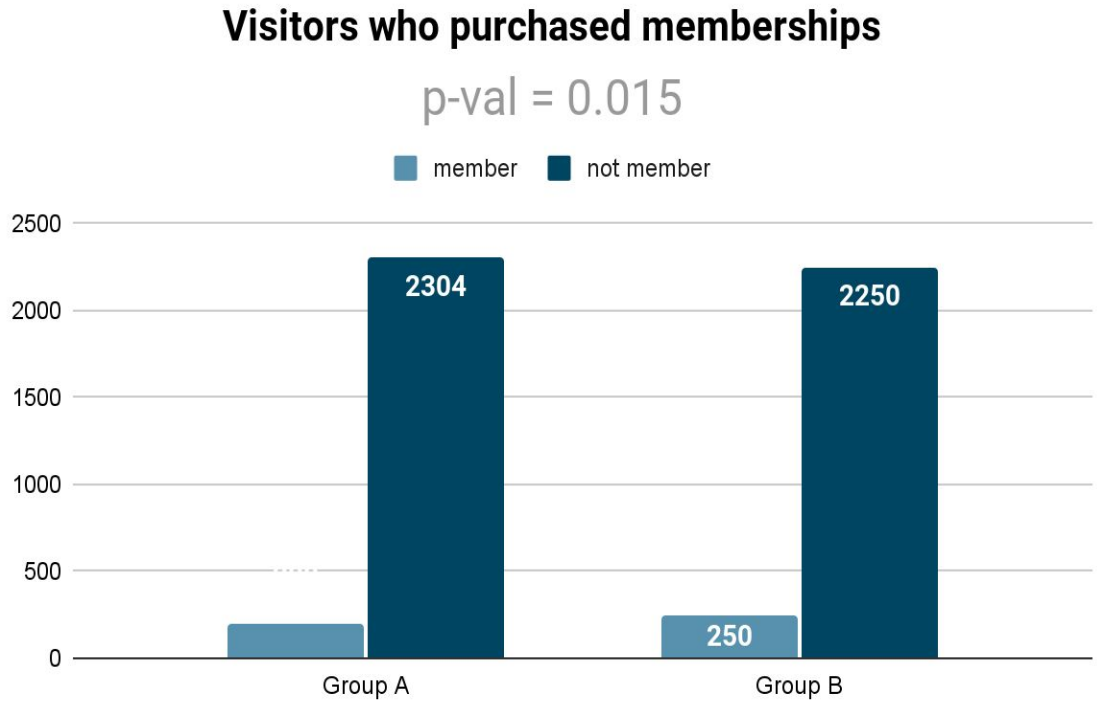
- **10%** of people in group **A** filled out an application
- **13%** of people in group **B** filled out an application
- A p-value of 0.00096 is less than a significance threshold of 0.05 which indicate a **strong** significant **difference** between the two groups

3.2 Count of memberships from applications



- **80%** of people in group **A** of applicants purchased a membership
- **77%** of people in group **B** of applicants purchased a membership
- A p-value of 0.43 is more than a significance threshold of 0.05 which indicate **no significant difference** between the two groups

3.3 Count of all memberships



- **8%** of people in group **A** purchased a membership
- **10%** of people in group **B** purchased a membership
- A p-value of 0.015 is less than a significance threshold of 0.05 which indicate a **significant difference** between the two groups

4. Conclusion

4. Conclusions

1

People who did not take a fitness test are more likely to turn in an application

2

There is no difference between groups A and B in applicants who bought a membership

3

This A/B test corroborates Janet hypothesis :
The fitness test can be an obstacle for potential customers