**Muscle Hub A/B Testing**

**Introduction**

**Background**

Muscle Hub provides gym services to customers by charging their membership fees. In order to boost revenue, or attract more customers to join the gym, the owner, Janet, offers a fitness test for any potential customers. The test is to tell the potential customers what level they are at and to let the gym plan out better fitness plans for the customers accordingly.

**Problem**

The data might contribute to determining whether the fitness test is effective might include the date customers take the test, application date/no application, purchase date/no purchase. This project aims to determine whether the fitness test is effective in attracting more customers.

**Interest**

The owner, Janet, will be the most interested in this report. The gym employees, such as instructors, should be interested in it as well.

**Data**

**Data source**

All the data is from Codecademy ([click here](https://www.codecademy.com/paths/analyze-data-with-python/tracks/ida-8-final-projects/modules/ida-8-2-capstones/informationals/ida-capstone-musclehub)).

**Data cleaning**

Data are separated in 4 different csv files and combined into one data frame. I only focus on the data after July 1st, 2017, since when the fitness test was provided.

**Feature selection**

The features are visit date, fitness test date, application date, and purchase date. Feature like customer email will be dropped since it has no use in this case. Customers’ gender may be considered in the analysis.

By joining the 4 different files by matching the customer name, we will get the information that which customers take the tests, which customers file applications, which customers make the purchases, etc.