Project Presentation: Cardio Good Fitness

By: Syeda Ambreen Karim Bokhari

Contents

Background

Business Problem

The given data is the demographics of customers who bought treadmill product(s) from a retail store called Cardio Good Fitness.

There is customer's treadmill usage data as well. There were three treadmill models:

1. TM195
2. TM498
3. TM798

Solution Approach - **Key Questions:**

What are the different variables that influence buying of treadmills?

Which factor affects the purchase the most?

What could be plausible reasons for that?

Solution Approach

1

Explore the dataset to identify differences between customers of each product.

2

Explore relationships between the different attributes of customers.

3

To perform Exploratory Data Analysis.

4

Generate a set of insights and recommendations for targeting new customers

Data Overview

The data contains the following variables:

Variable	Description
1. Product	The model no. of the treadmill
2. Age	In no of years, of the customer
3. Gender	of the customer
4. Education	In no. of years, of the customer
5. Marital Status	Of the customer
6. Usage	Avg. number of times the customer wants to use the treadmill every week
7. Fitness	Self rated fitness score of the customer (5 - very fit, 1 - very unfit)
8. Income	Annual income of the customer
9. Miles	Expected to run

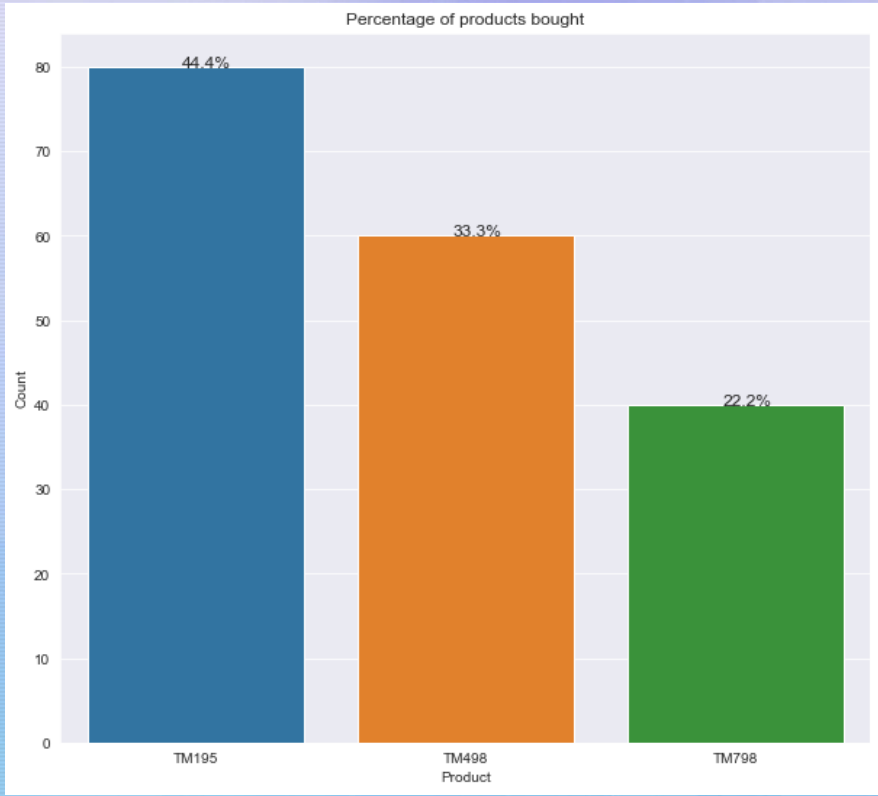
Observations:	Variables:
180	9

Note:

1. There are no missing values in the data.
2. The variables: Product, Gender and Marital Status were converted from object to category data type.

Financial Insights:

The %age sales of treadmills.



TM195 is the most popular among customers, It has the highest sales, 44.4%

TM498 is second most popular among customers, it has 33.3% sales.

TM798 has the lowest sale 22%
It has small customers – base. We can look into the problem further.

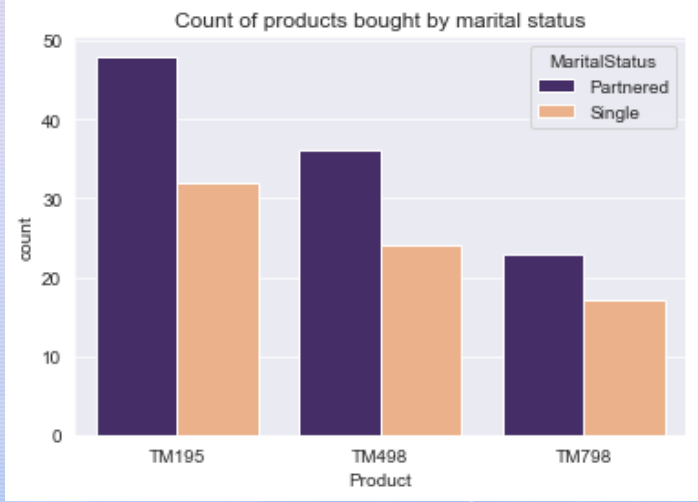
Exploratory Data Analysis:

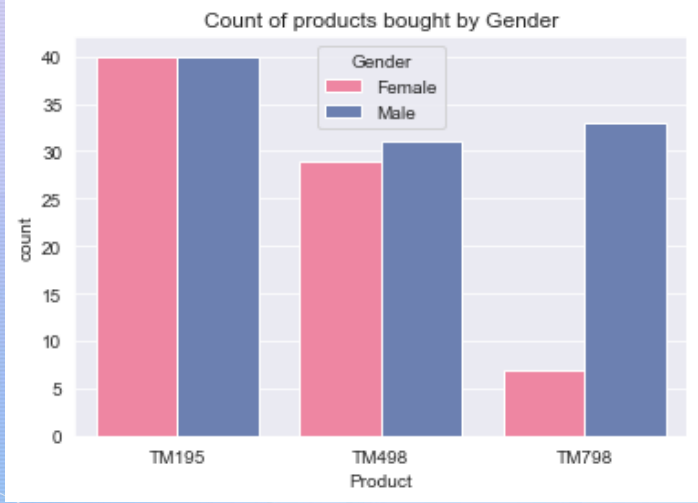
Correlation matrix among different numeric factors.

There is positive correlation between Usage & Miles and Fitness & Usage.
There is little correlation of income with Education, Age, Usage, Fitness and Miles
There is no correlation between Age & Usage, between Miles & Age and between Age & Fitness

Exploratory Data Analysis:

Marital status and Gender:





Insights:

TM195

- Popular in both male and female customers
- more in partnered than single customers.

TM498:

- Popular in both males and females
- more in partnered than in single customers.

TM798:

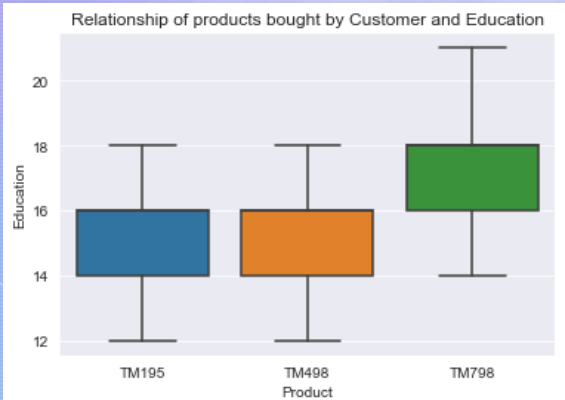
- Popular in Males than in female customers.

Exploratory Data Analysis:

The factors impacting the purchase: (Customer's demographics)

Annual Income

Education



Age

Insights:

TM195

- 50% customers ages from range 23-33, average ~28
- income range 38000-53000
- Education 14-16 years.
- Some outliers at age 50.

TM498:

- 50% customers ages from range 23-33 average ~29,
- income range 45000-53000
- Education 14-16 years.
- Some outliers at age 47 and income 68000.

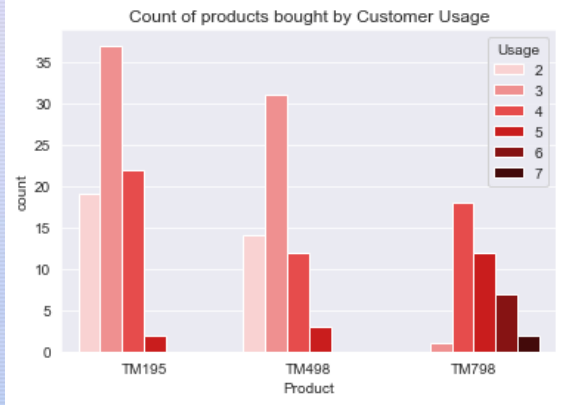
TM798:

- 50% customers age from range 25-30 average ~29
- income range 58000-91000
- Education 16-18 years.
- Many outliers at age 39-48.

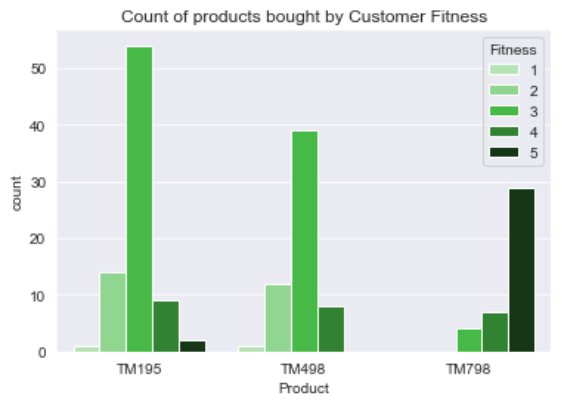
Exploratory Data Analysis:

The factors impacting the purchase: (Use of treadmills)

Weekly treadmill usage



Customer fitness level



Miles expected

Insights:

TM195

- Popular in customers who
- workout 3 times a week
- have average fitness level,(3)
- are expected to run 88miles on average, max 188 miles.

TM498:

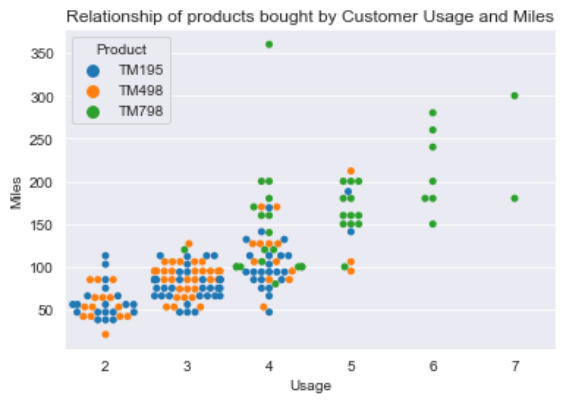
- Popular in customers who
- workout 3 times a week
- have average fitness level,(3)
- are expected to run 88miles on average, max 212 miles.

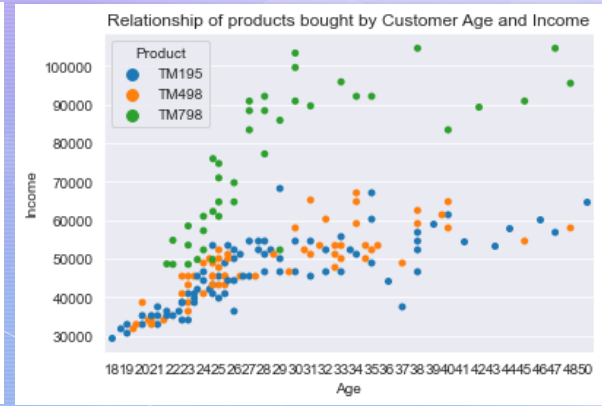
TM798:

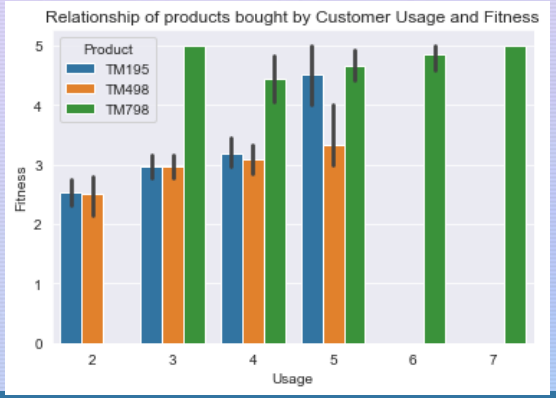
- Popular in customers who
- workout 4 times a week
- have average fitness level,(5)
- are expected to run 167miles on average, max 360 miles.

Exploratory Data Analysis:

The relationship between factors impacting the purchase:







TM195 users

- Ages: 23-33
- Average Run <100 miles,
- Average Income< 60000
- Weekly use:3
- Fitness level: 3

TM498 users

- Ages:23-33
- Average Run <100 miles,
- Average Income< 60000
- Weekly use:3
- Fitness level: 3

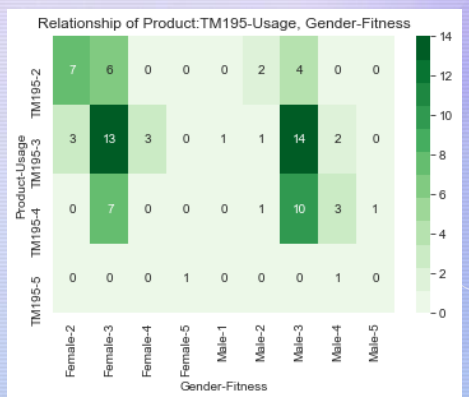
TM498 users

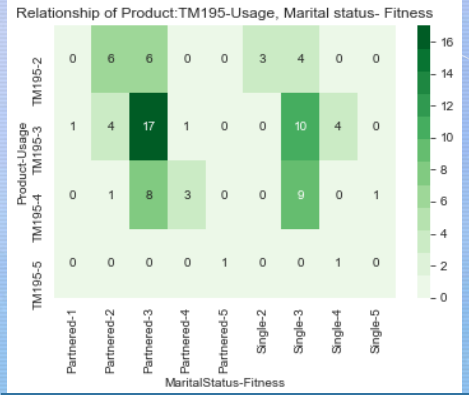
- Ages:25-33
- Average Run <100 miles,
- Average Income< 60000
- Weekly use: 5
- Fitness level: 5

The relationship between factors impacting the purchase:

Exploratory Data Analysis

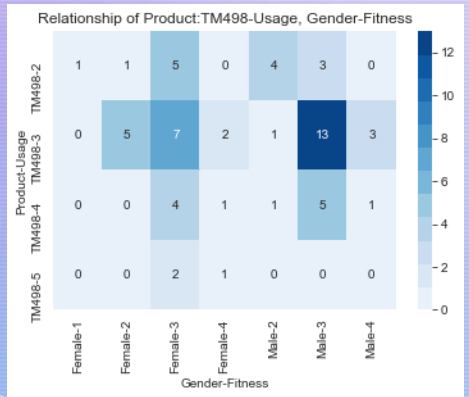
TM195

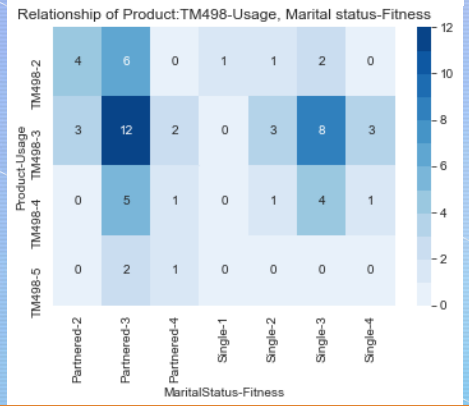




TM195 is bought mostly by
- married males and females
- Weekly use:3
- Fitness level: 3

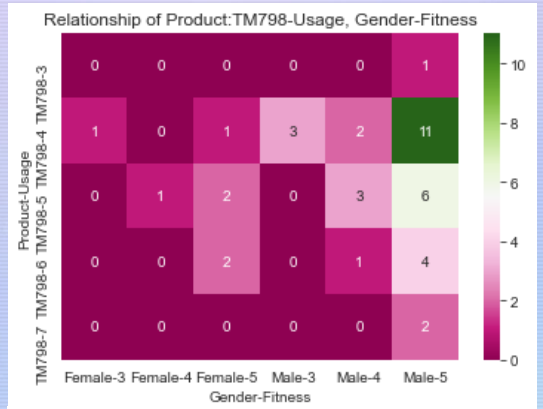
TM498:

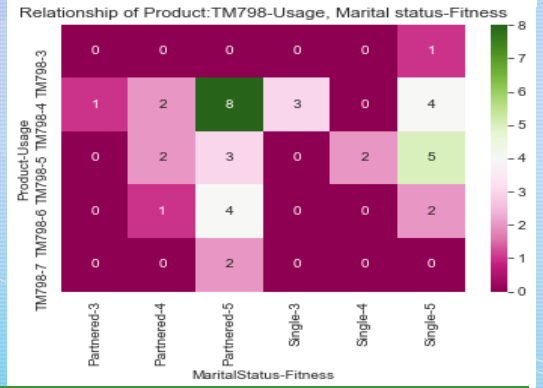




TM498 is bought by mostly
- males and females
- Weekly use:3
- Fitness level: 3

TM798:





TM798 is bought by mostly
- Partnered males
- Weekly use:4-5
- Fitness level: 5

Business Insights and Recommendations

Conclusion: Ideal Customer Profile

TM195

- Young male and female married customers(23-33)
- Bachelor/masters
- With less buying power 38K-53K
- Workout in moderation: 3
- Moderate fitness level.: 3

TM498:

- Young males and females (23-33)
- Bachelor/masters
- With moderate buying power.45K-53K
- Workout in moderation: 3
- Moderate fitness level.: 3

TM798:

- Young Males (25-30)
- Masters/ Doctorate
- With high buying power:58K-91K
- Excessive workout: 4-5
- High fitness level.: 5
- May be an athlete.

Business Insights and Recommendations

Recommendation for potential customers:

TM195

- Males and Females ages 35-50 with low income and average fitness level could be targeted for buying this product.
- It can be put on deal with some other fitness product to improve sales.

TM498:

- Males and Females ages 35-50 with moderate income and average fitness level could be targeted for buying this product.
- Customers with lower income can also be targeted to buy this product with more incentives.

TM798:

- Males ages 35-50 and Females ages 25-50 with high income and high fitness level could be targeted for buying this product.
- Customers with moderate income can be targeted with incentives.

Business Insights and Recommendations

Comments on additional data sources for model improvement:

- Additional data about customer's nature of work can be benificial. E.g individuals with sports background can be targeted with some product deals or incentive.
- More customer data about their type of residence. E.g people living in apartments would need a treadmill more as compared to people living in villas.
- Availability of a gym near their residence or work place.
- Average climate of their residence area, E.g extreme climatic conditions can impact buying treadmills.

THE END