

# Cardio Good Fitness Project

# Objective

Preliminary Data Analysis. Explore the dataset and practice extracting basic observations about the data. You are expected to do the following :

- Explore customer's profile (characteristics of a customer) of the different products
- Perform univariate and multivariate analyses
- Generate a set of insights and recommendations that will help the company in targeting new customers

# Data Information

This data is about customers of the treadmill product(s) of a retail store called Cardio Good Fitness. It contains the following variables:

- Product - The model no. of the treadmill
- Age - Age of the customer in no of years
- Gender - Gender of the customer
- Education - Education of the customer in no. of years
- Marital Status - Marital status of the customer
- Usage - Avg. # times the customer wants to use the treadmill every week
- Fitness - Self rated fitness score of the customer (5 - very fit, 1 - very unfit)
- Income - Income of the customer
- Miles- Miles that a customer expects to run

Observations	Variables
180	9

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## Note:

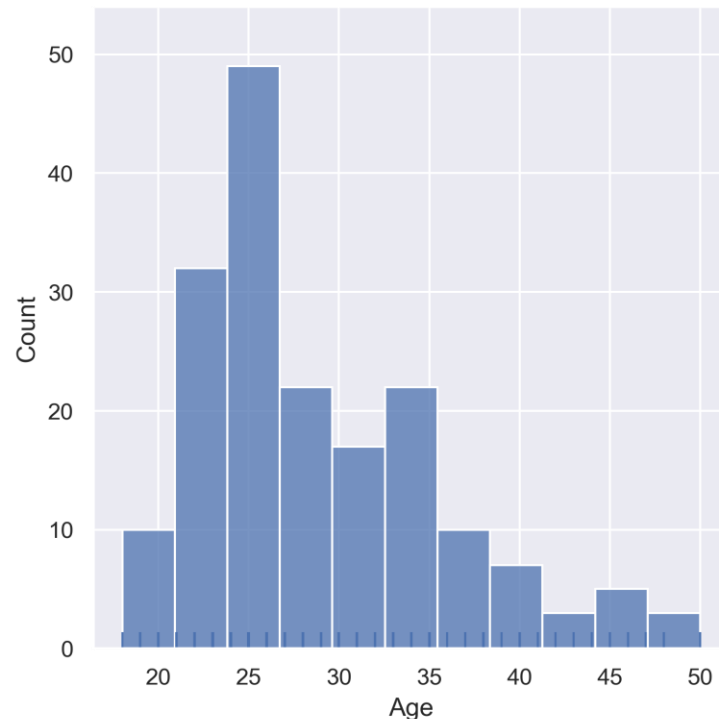
- There are no missing values in the dataset
-

# Plotting Univariate Distributions

Let us explore on of the univariate distributions with a displot of the age range.

## Observation:

- The age of our customers are positively skewed with a higher concentration between 18 years old and 35 years old

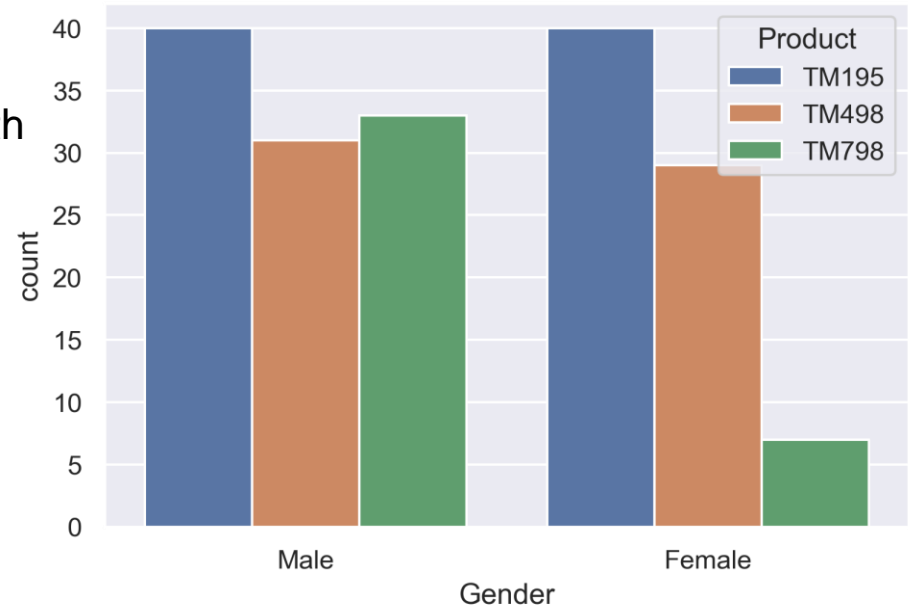


## Examine each variables

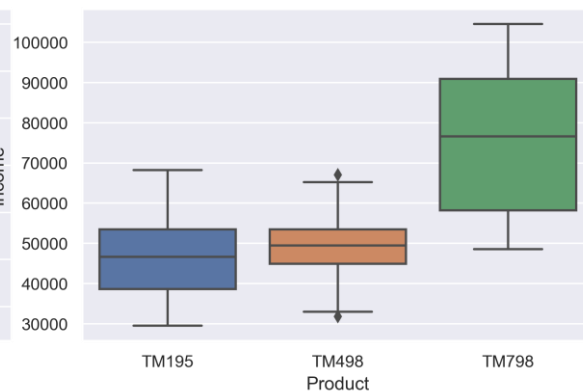
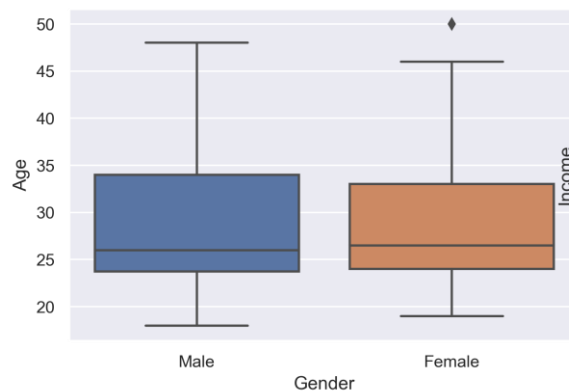
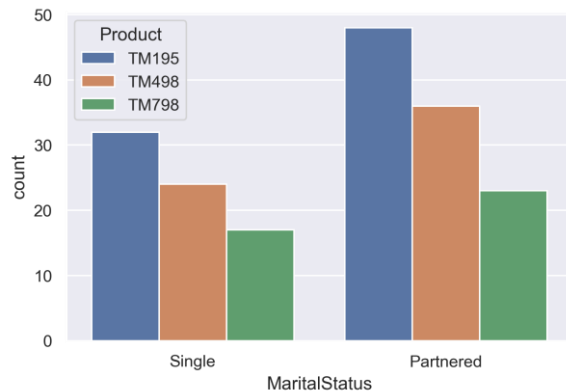
Analysing the Gender and the different product using (Count plot)

### Observations

- TM195 have similar characteristics in both Male and Female graphical representation above.



# Exploring different variables – Marital Status ,Gender, Product, Age and Income



## Observation

- TM195 seems having wider range of age groups compared to other two products

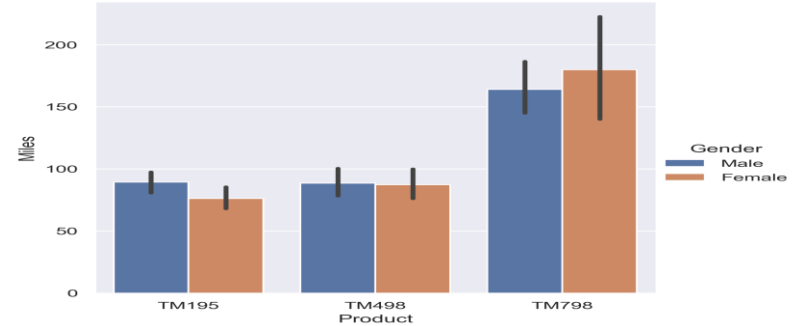
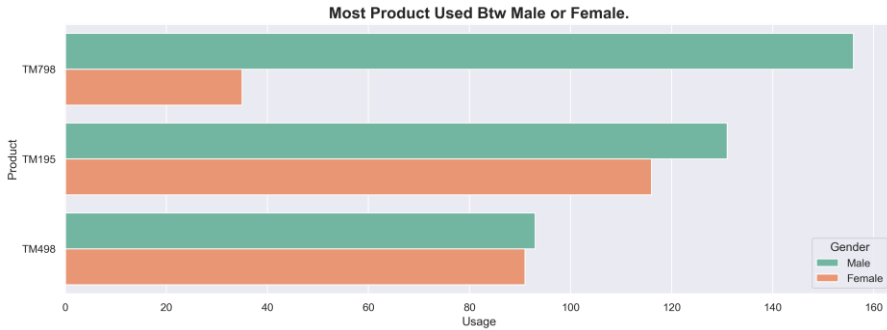
## Observation

- There are Outlier in the Female Age, while the male age don't have an Outlier

## Observation

- This shows more income are generated from the product TM789

# Relationship between Products, Miles and Gender/Checking for Product : Usage vs Gender



## Observations

- Generally Male use more product than Female
- For product TM798 there is a huge usage for Male client over Female while for product TM498, the usage is almost the same

## Observations

- TM195 : average planned miles male = 90 ; female = 75.
- TM498 : average planned miles male = 90 ; female = 90.
- TM798 : average planned miles male = 160 ; female = 175.
- Mostly male and female are planning to run equally.
- Average planned number of miles run by user of TM195 and TM498 are almost similar.
- Average planned number of miles run by user of TM798 is in the high range

# Income by gender by product and by marital status

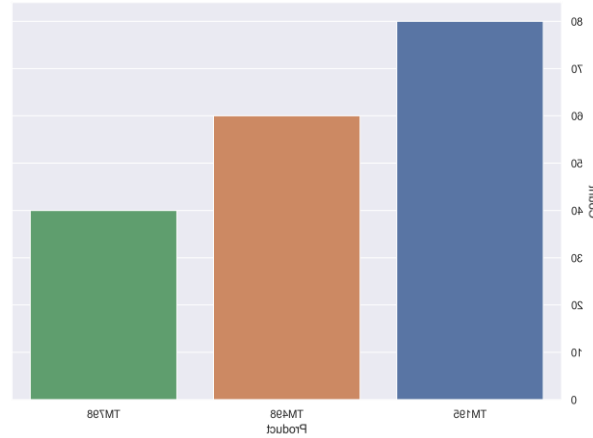
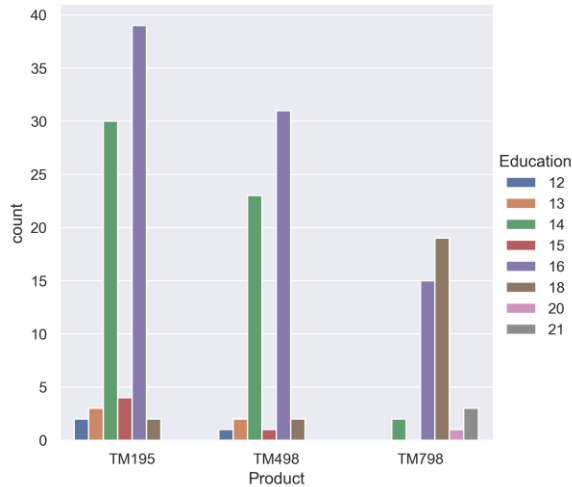


## Observations

- Products TM195 and TM498 are bought by people with lower than \$70K as income, single or partnered.
- We also see that the majority of people who buys the TM798 are man, partnered.
- The majority of our buyers are man.



# Educational Analysis and Observations on Product



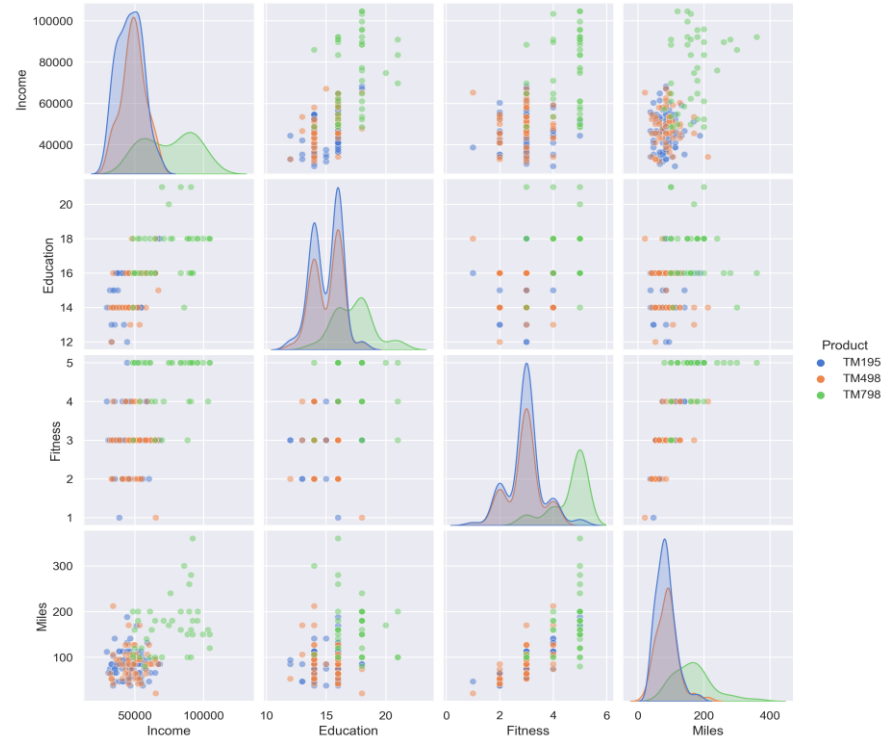
## ● Observations

- TM195 is most sold product.
- The number of customers preferring TM195 is most twice as the once preferring TM798.
- It looks like TM195 is more economical or popular model compared to the other two models.

# Overview of correlation between variable

## Observation

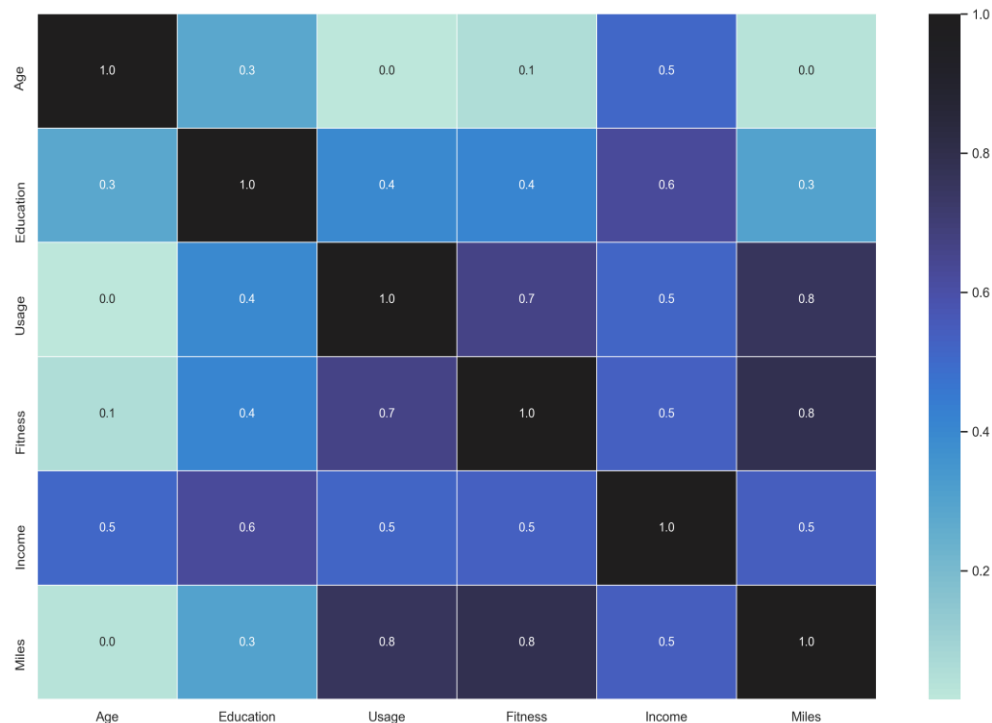
- Customers of TM195 and TM498 appear to be having similar features with minor differences. TM798 is more appealing to the highly educated group who has more expendable income and more conscious about their fit wellness.



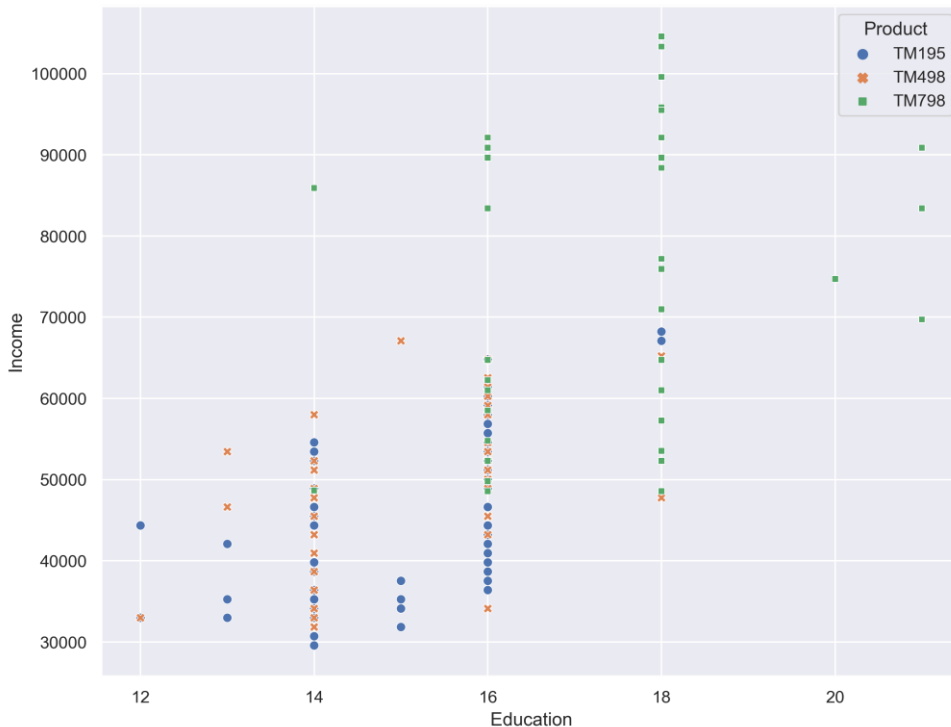
# Checking Correlations Between the Variables

## Observations

- High correlation between the Miles and Usage
- High correlation between the Miles and Fitness
- High correlation between the Income and Education
- High correlation between the Fitness and Usage



# How do income and Education affect the decision of which model is bought?



## Observations

- We can say that TM798 is the most expensive model
- Customers with higher education levels tend to purchase the TM798 as indicated by the right-shift in the distribution for the TM798.
- Customers who purchased the TM195 or TM498 tended to be college educated or pursuing a college degree

# Conclusion

- TM195 is the most economic choice for beginners TM798 is an expert level fitness choice TM498 and TM798 customer characteristics does not vary that much.
- TM195 is the most popular product TM195 is preferred among customers with lower income range, fitness level less than equal to 3 and usage less than 4 times in a week. TM195 is bought by people who are not planning to run above 180 miles.
- TM498 is next in rank to TM195 in terms of popularity It also caters for customers with lower income but moderate fitness level.
- TM798 is the least sold product It's high end and preferred among customers with higher income range, fitness level above 4 and regular usage of more than 4 times a week. TM798 is a high-end model preferred by people planning to run more number of miles.

# Recommendations

- Customer with education of 16 years are the greatest buyer of the product which means our major customer are the people with high level of education, they are also Partnered customer with a higher income.
- Customer with education less than or below 16 years and single customers are now are new target



Happy Learning !

