CARDIO GOOD FITNESS

Content:

Cardio good fitness is a retail store that deals in treadmills for a wide range of clients. They currently have three types of treadmills in stock TM195, TM498 and TM798. The retail store is looking for ways to boost sales this year. They intend to focus on all three types or focus on the brand that brings in more sales.

Expectation :

1.Develop a customer profile (characteristics of a customer) of the different products

2.Perform univariate, bivariate and multivariate analyses

3.Generate a set of insights and recommendations that will help the company in targeting new customers

BUSINESS PROBLEM OVERVIEW AND SOLUTION APPROACH

Core business idea:

Business is into the retailing of treadmills(TM195, TM498,TM798).

Problem to tackle:

● Increase sales

● Increase treadmill in stock

● Target market

● Make more profit on the type patronized by clients

● Find out which brand is more efficient.

DATA OVERVIEW

- Data is from customers of a treadmill product of a retail shop known as Cardio Good fitness.

- Product, Gender and Marital status were changed from object to categorical.

Variable	Value	Data type
Product	TM195,TM498,TM798	categorical
Age	18-50 years	numerical
Gender	Male/female	categorical
Education	12-21	numerical
Marital Status	Single/partnered	categorical
Usage	2-7	numerical
Fitness	1-5	numerical
Income	30K-100K	numerical
Miles	21-360	numerical

EXPLORATORY DATA ANALYSIS

PRODUCT
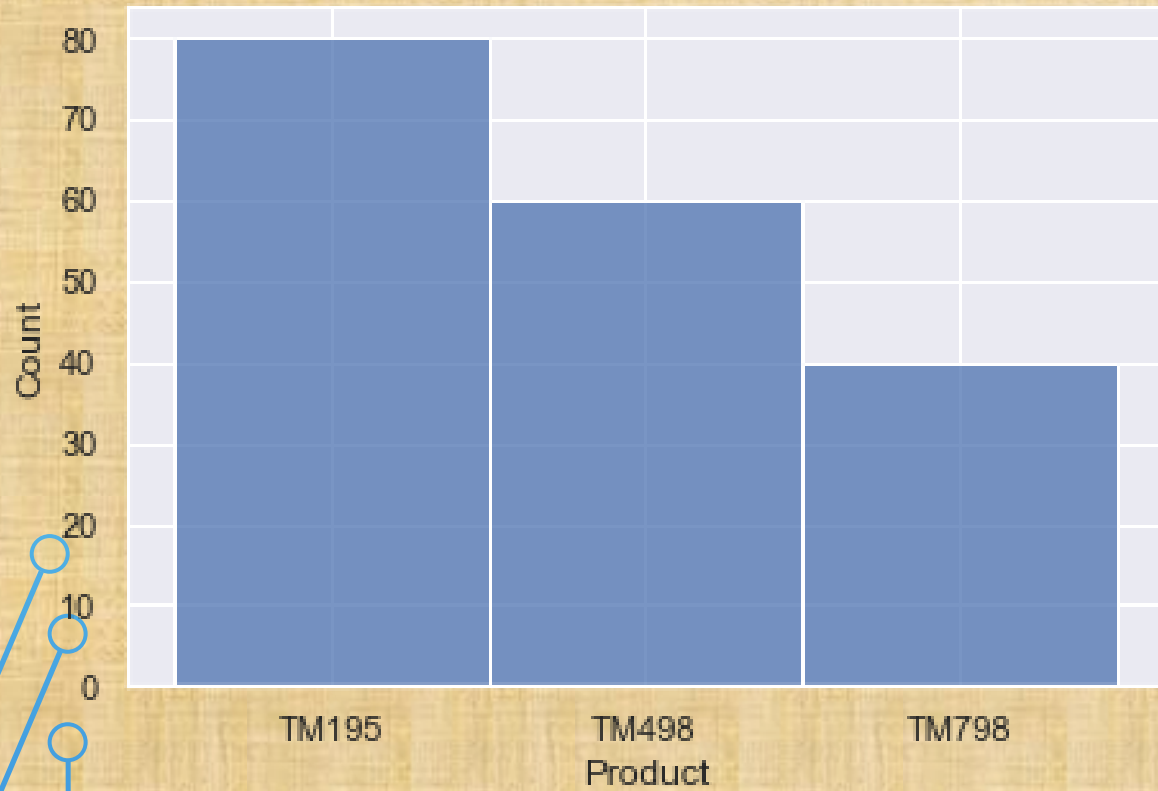
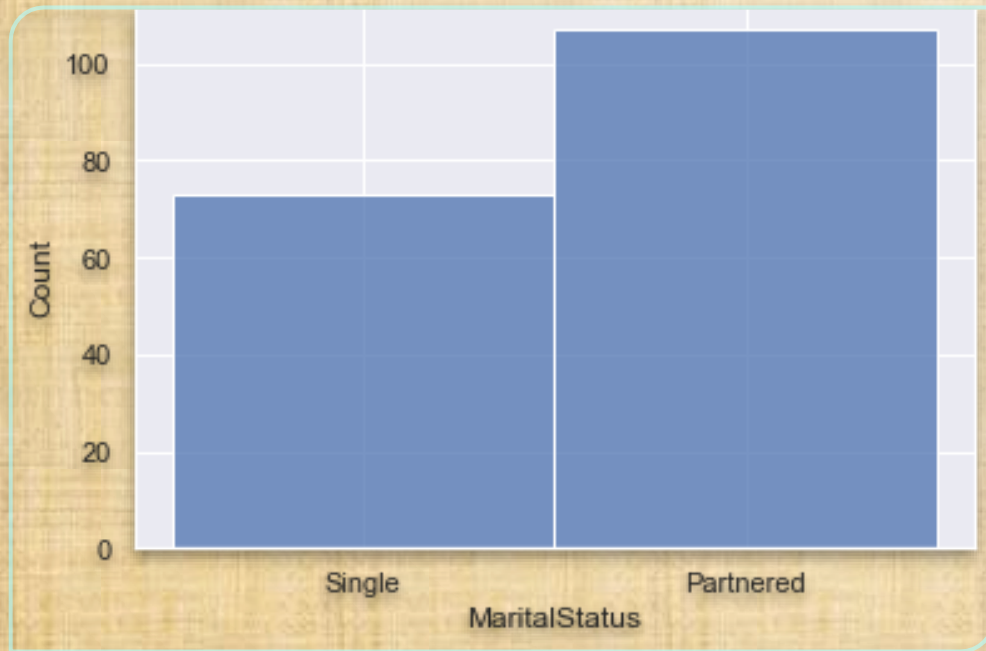- The most count brand is TM195
- TM798 has the least count.

GENDER VARIABLE
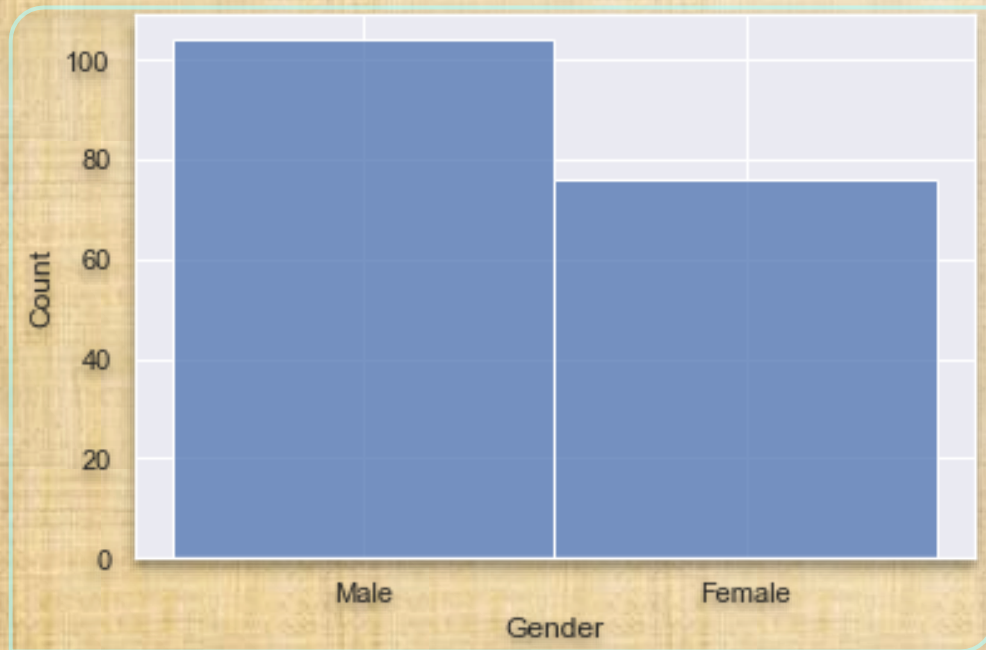
- 27% more males than females in the distribution

MARITAL STATUS VARIABLE

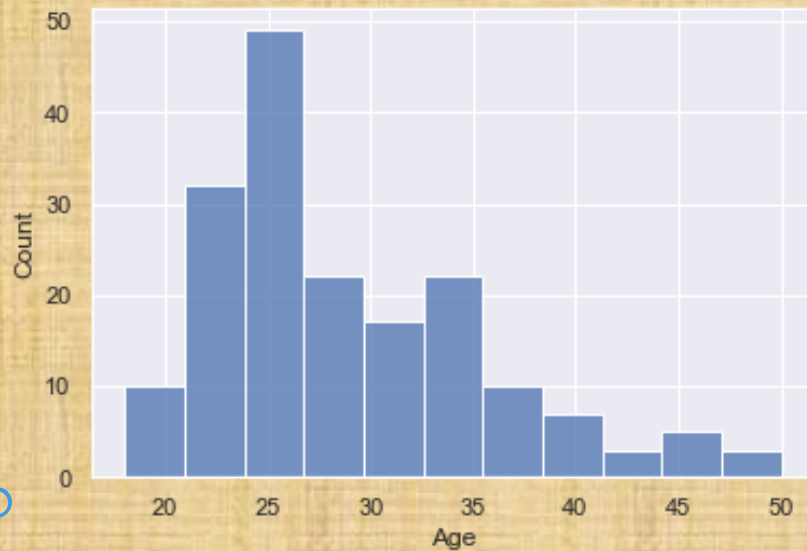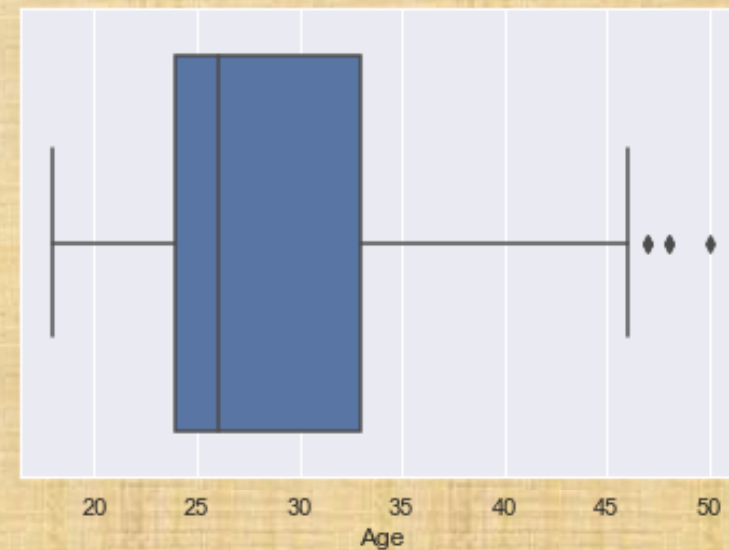- Partners are more than singles in the distribution

# AGE VARIABLE

- 25 is the mean age for this data.

- Age is skewed to the left
- 26 is the mean when box plot is used
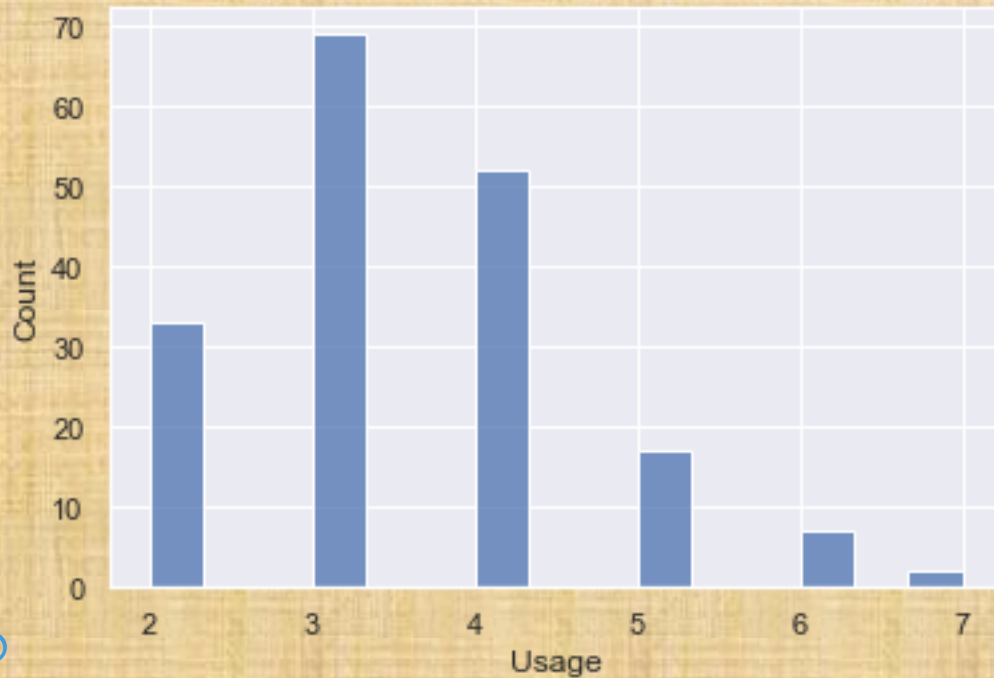- Outliers present which affects the various percentiles.

EDUCATION

- Mean and median is equal

- Few outliers are present to the right

- 25th and 75th percentiles are 12 and 18 respectively

USAGE

- Zero skewed because mean equals median

- Outliers present which affect mean and median

- 25th and 75th percentiles are 2 and 5 respectively.
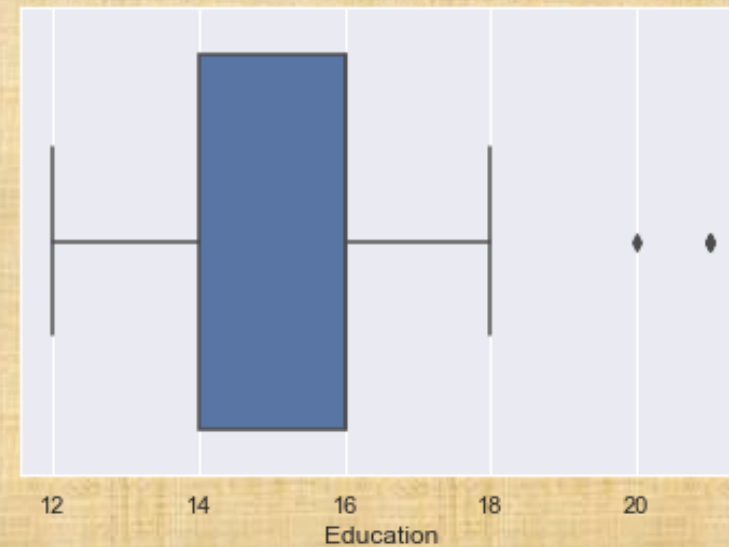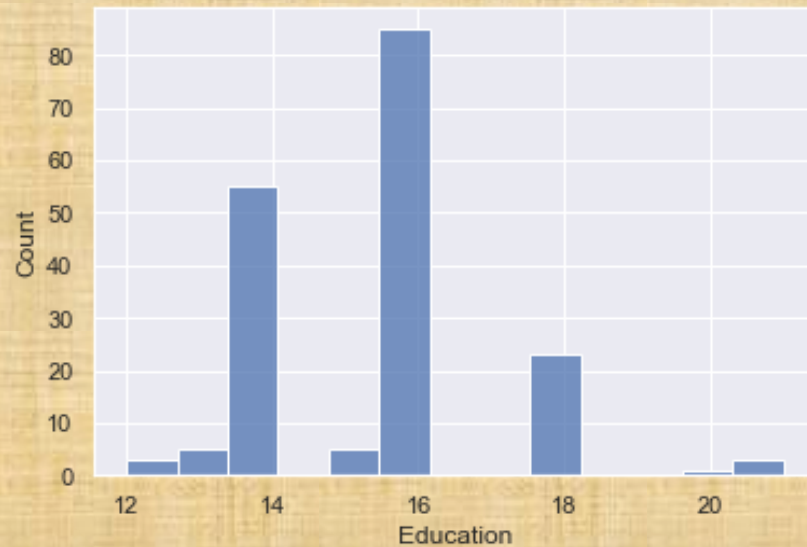
- Majority of clients use the product three times in a week and the lowest is seven times.

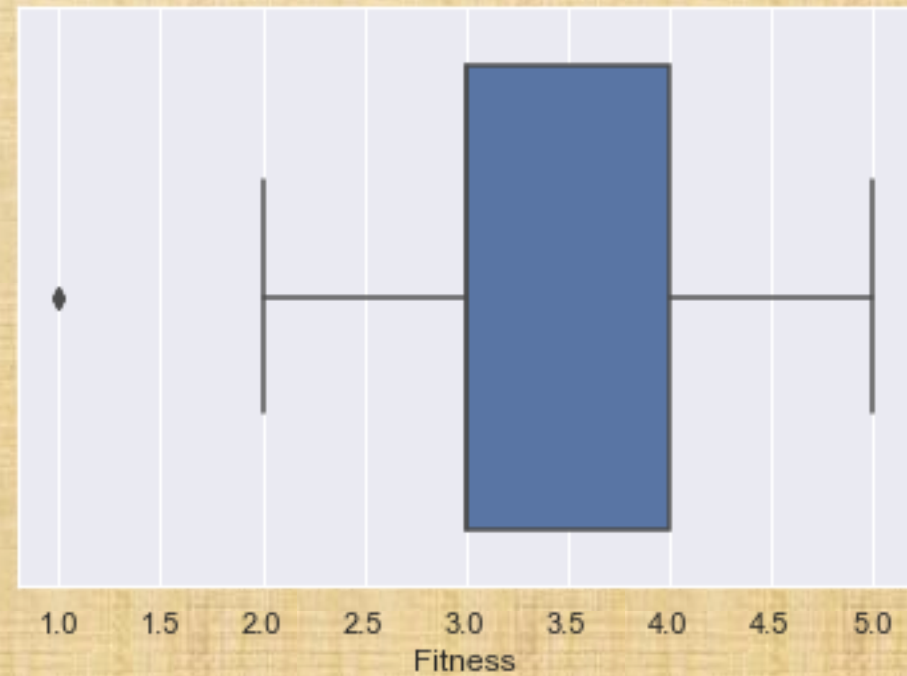- **The distribution is similar to education. It suggest possible correlation between the two variables.**
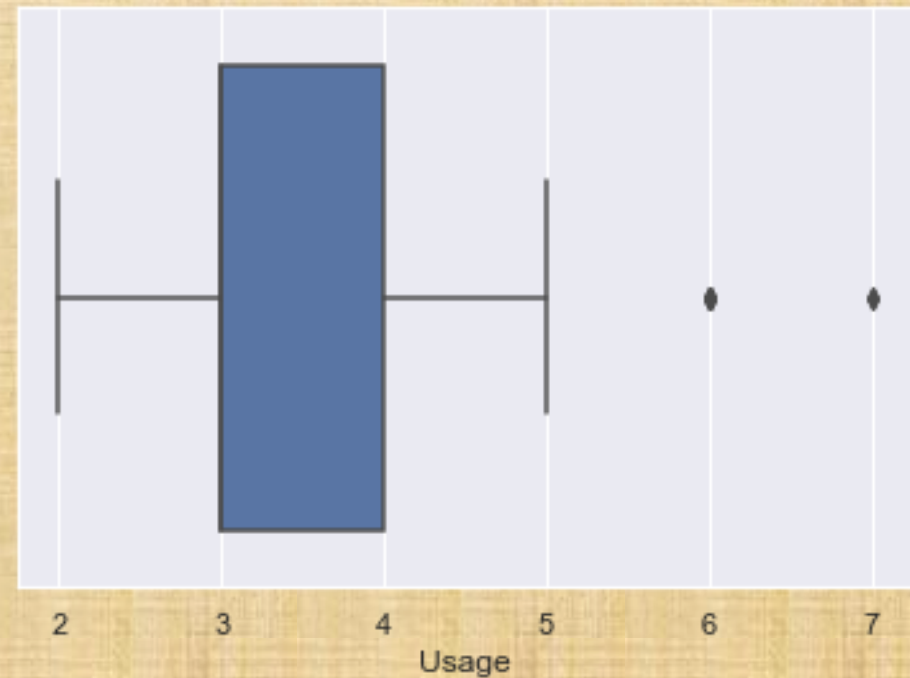
FITNESS

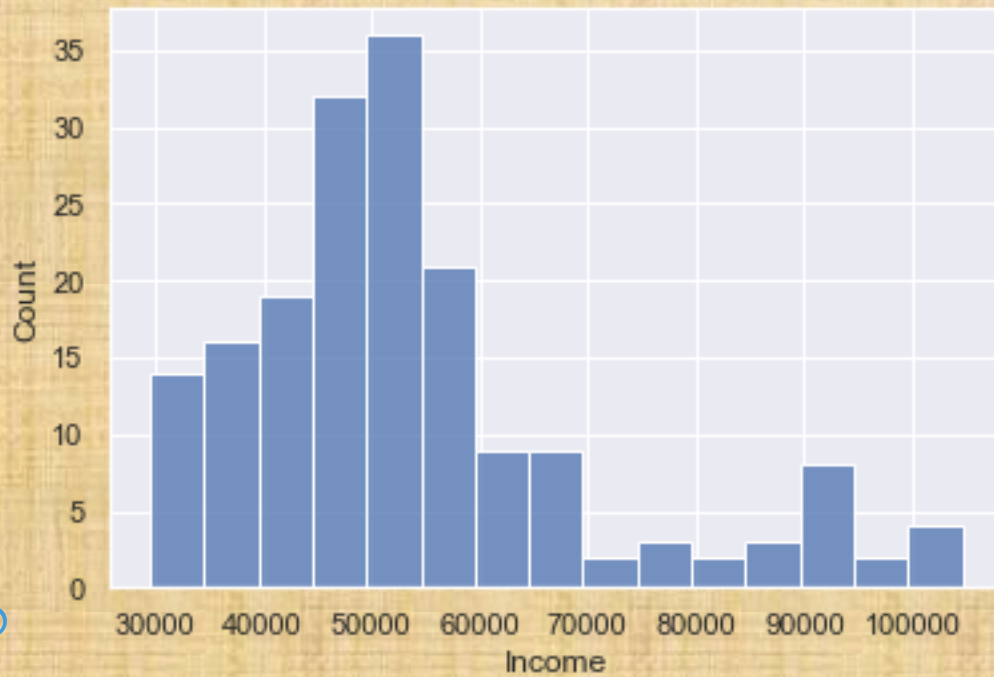- Most of the clients fitness level was at 3.
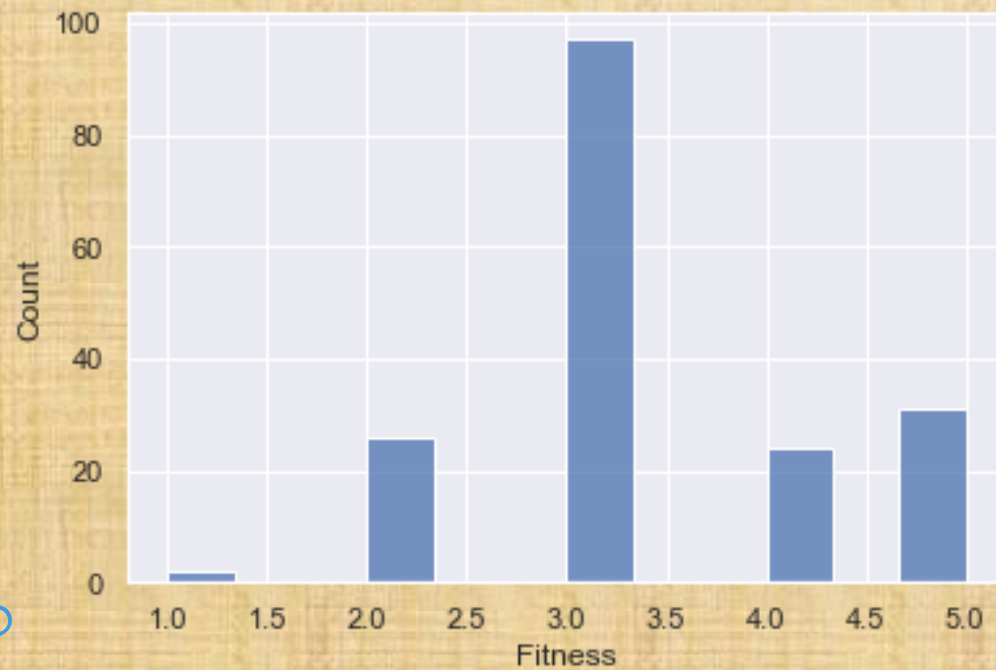
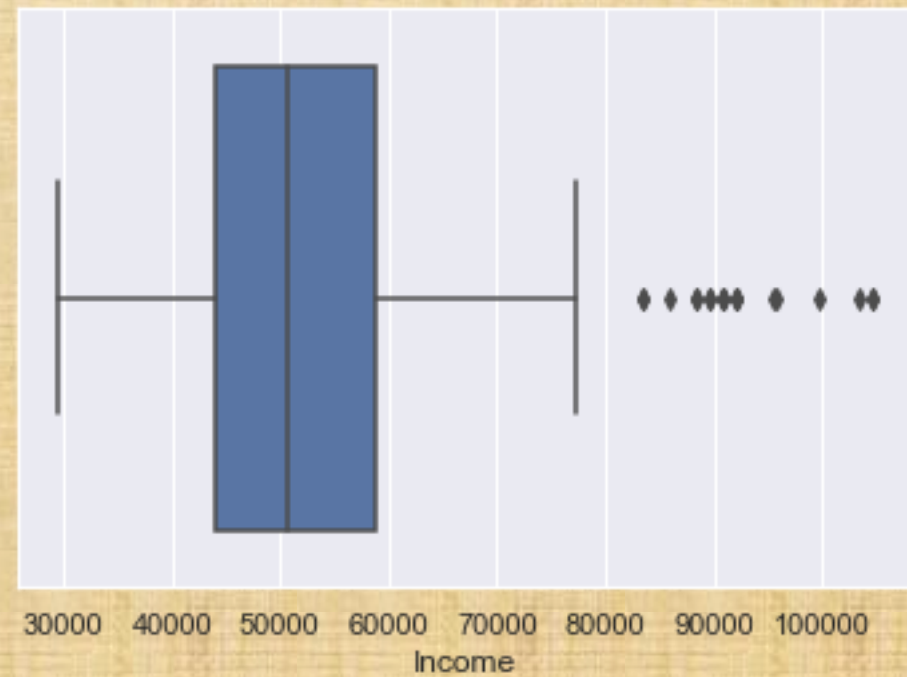- Zero skewed because mean equals median
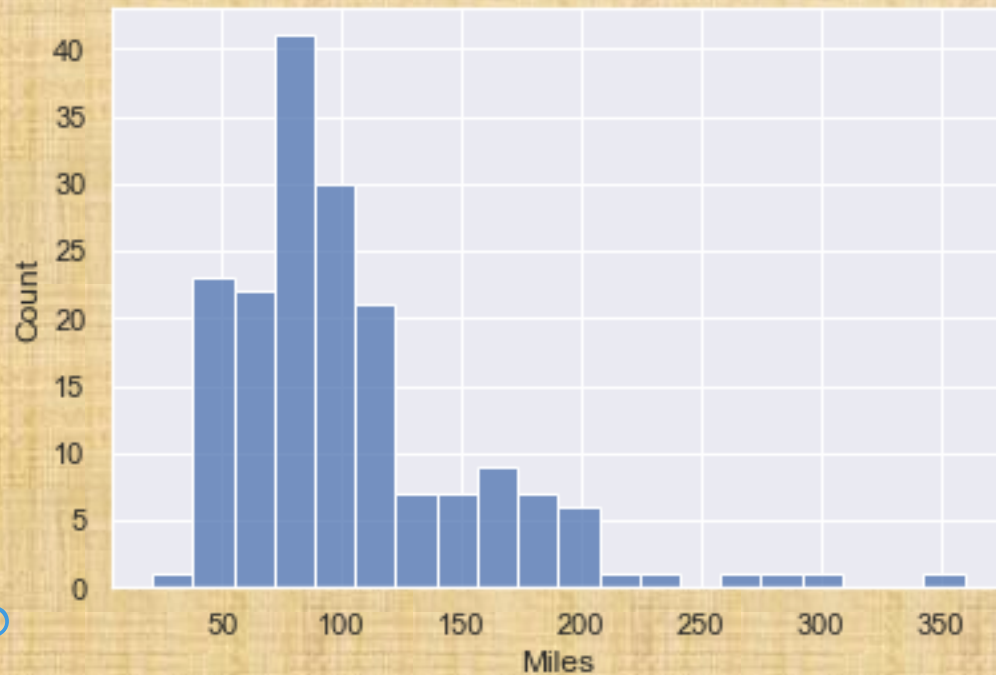
- Outlier present.

INCOME

- Negatively skewed
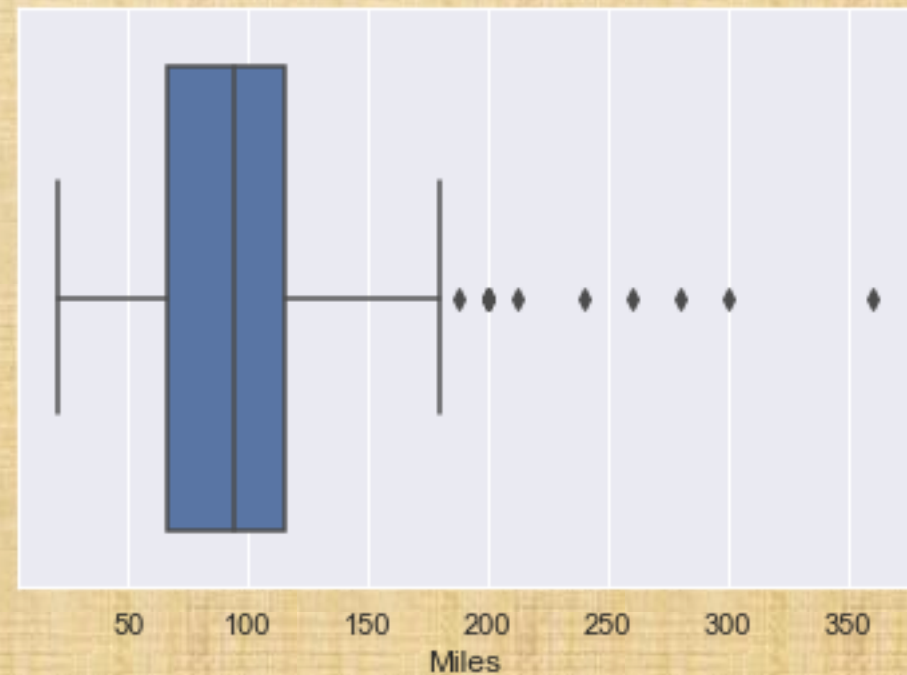- Outliers present at the right.

MILES

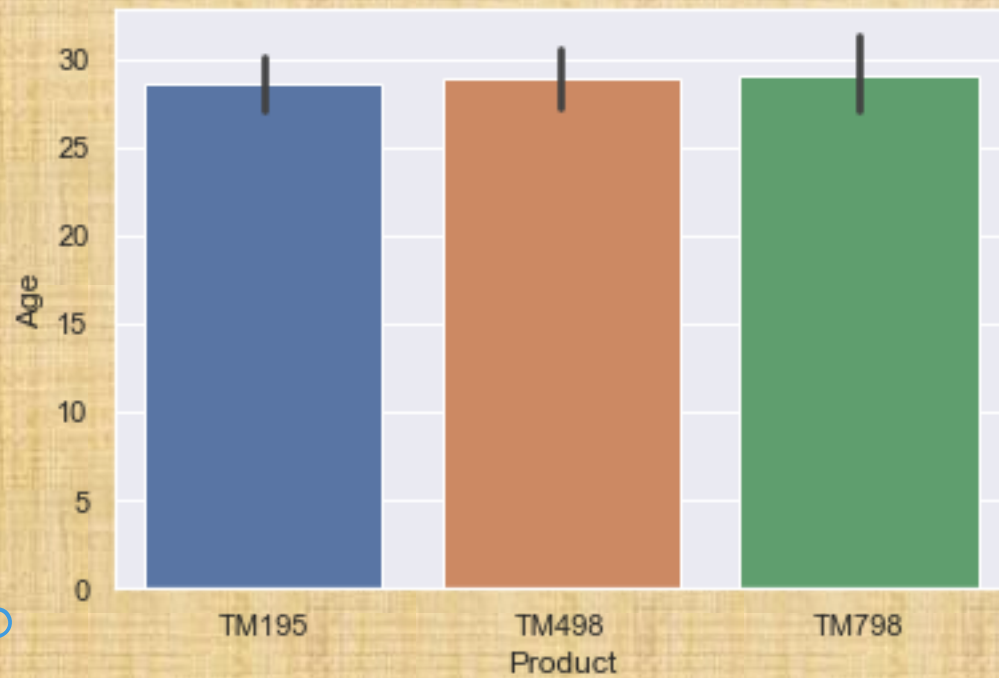- Mean miles run on the product is in 90.
- Skewed to the left

- Outliers present on the right.
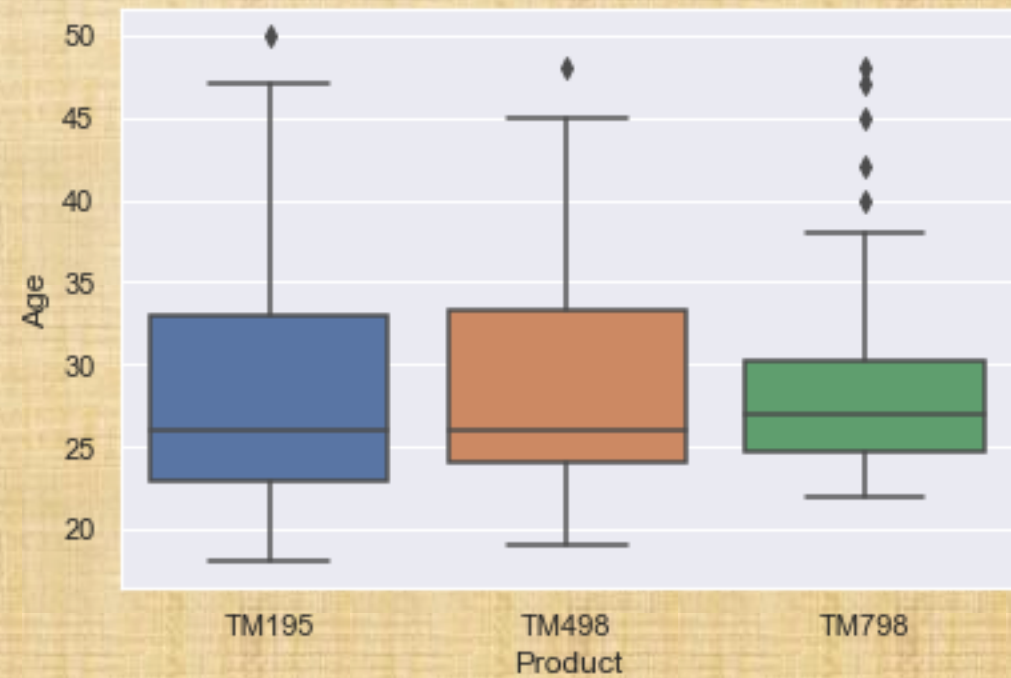- Mean must be 90 miles.

- All the brands are almost in the same age bracket.
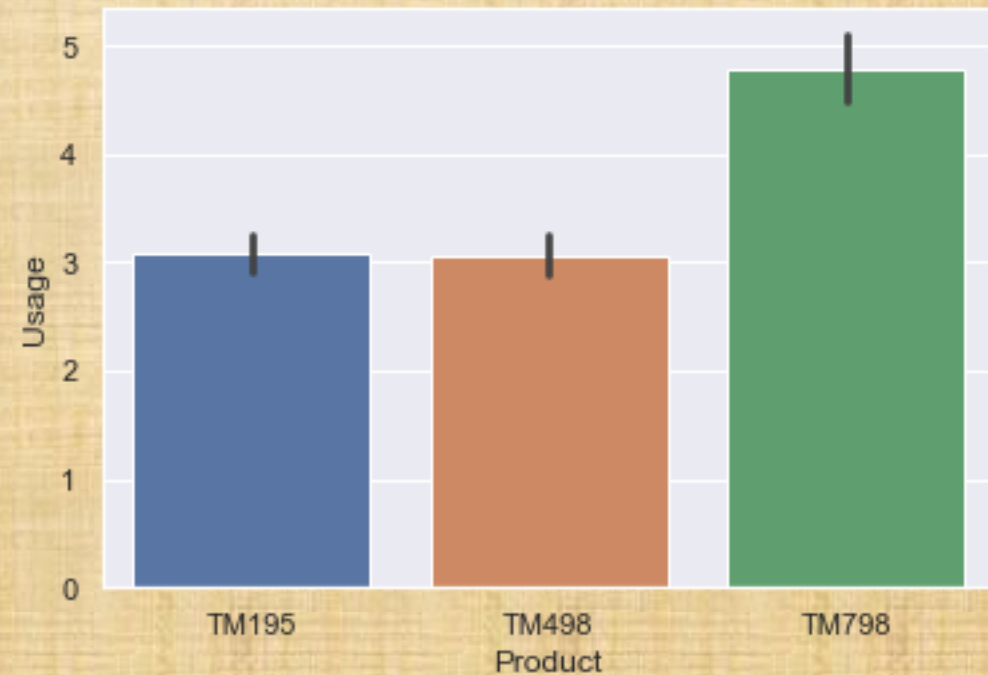
- Outliers present
- Mean is close across all brands.

- Education doesn't really have an impact on the type of product even though clients with higher education prefer TM798
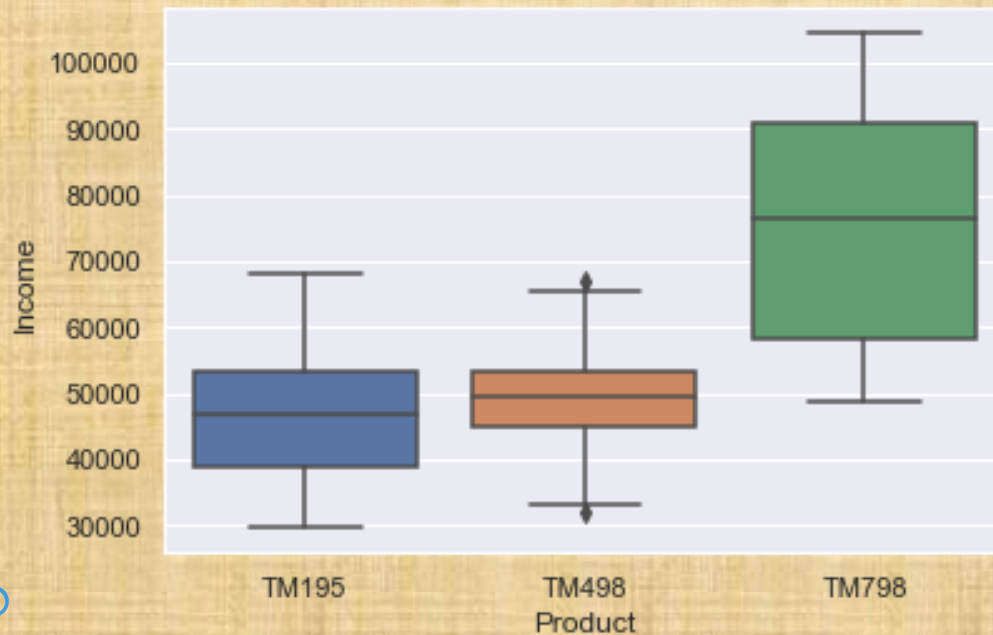
- Usage is higher in TM798 owners than the rest.

- Level of usage for tm195 and tm498 is around 3.

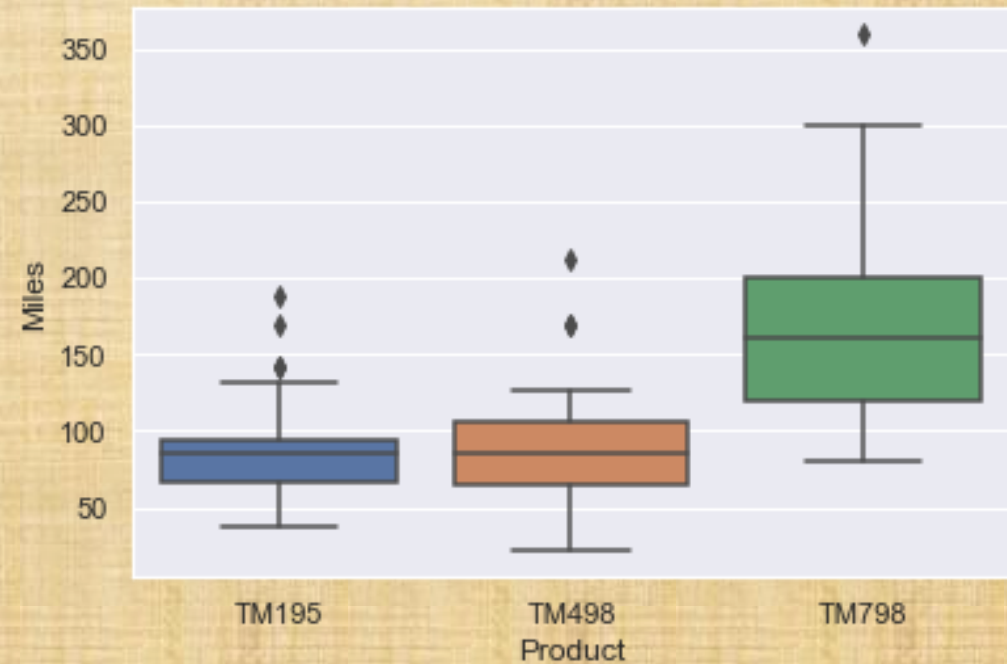- There are no outliers in TM195 and TM798 income

- The mean for TM195 and TM498 is almost close but that of TM798 is around 78000.

- There are outliers in all the product types which will have significant effect on the mean.

- TM798 has more miles than other brands.
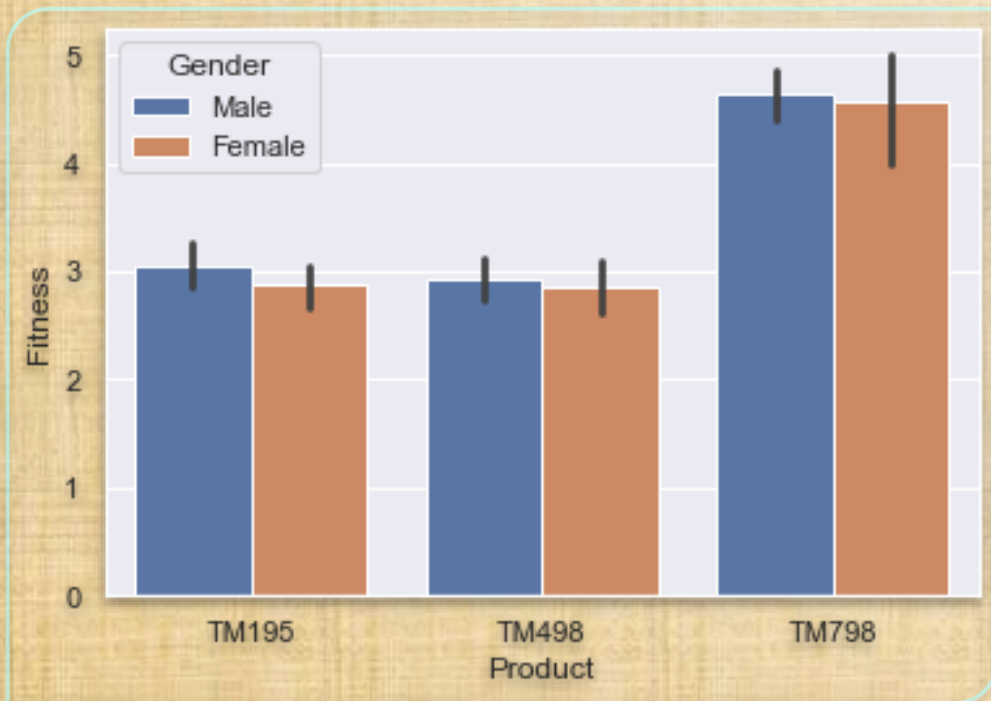
- Users of TM798 have higher fitness level than TM195 and TM498.

- Fitness level of males is slightly higher than females in all products.

- Age and gender dont have any significant effect on choice of product.
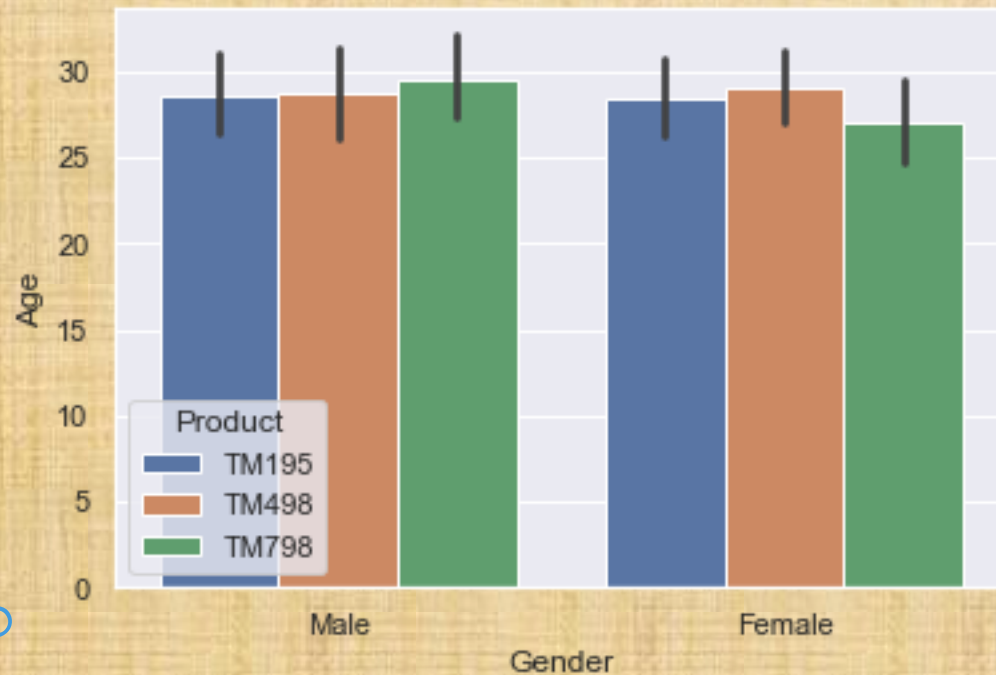
- Frequent usage is matched up with high fitness TM195 and TM498 have lower usage.
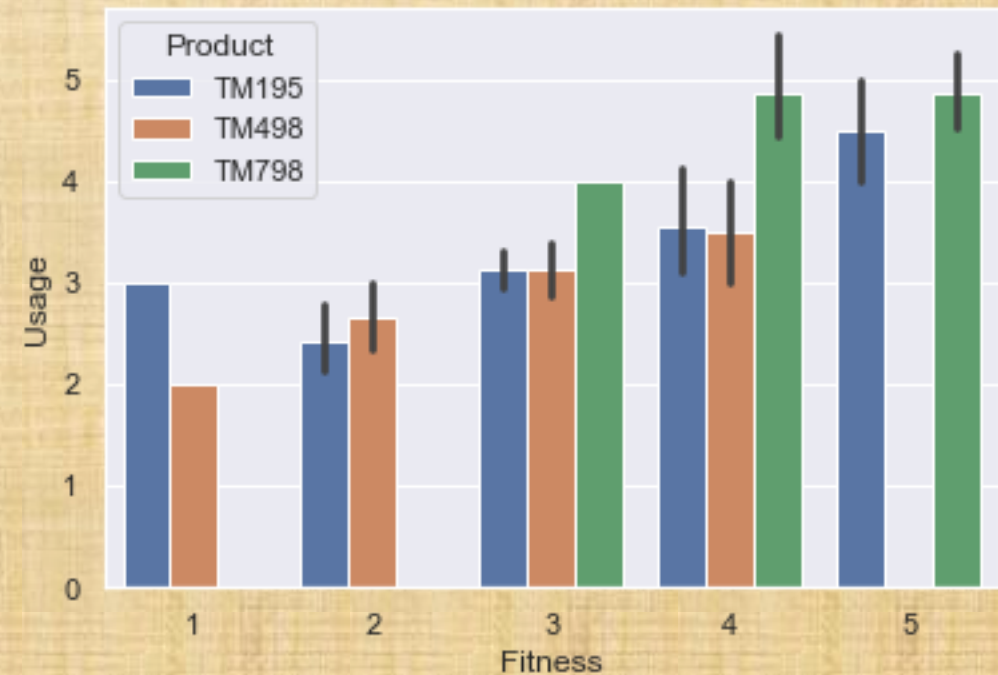
- Clients with high education have high level of fitness.

- Clients with high education prefer tm798
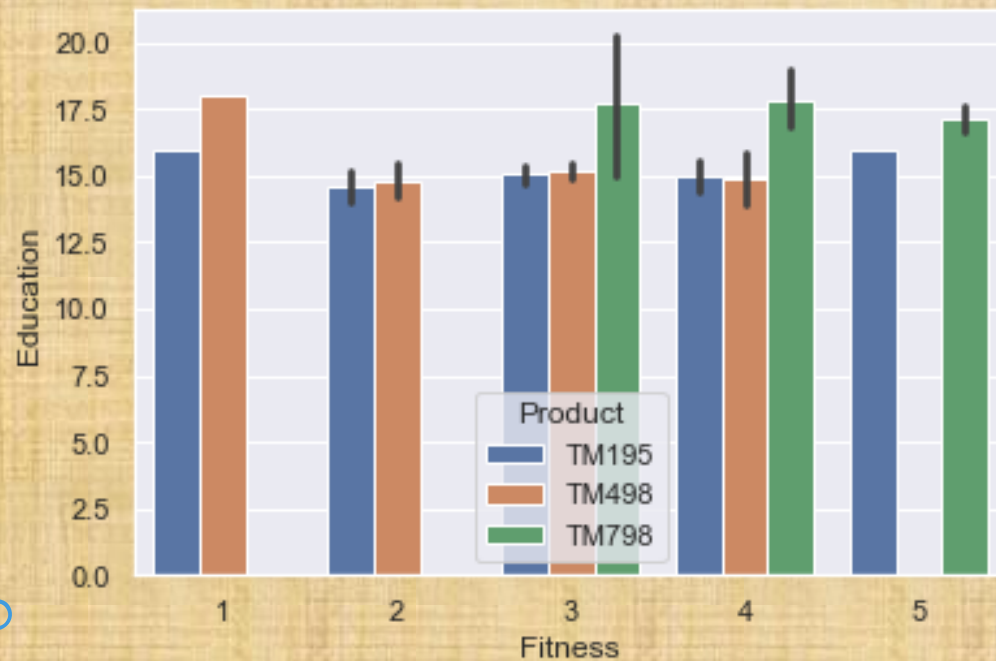
- Both single and partnered preferred TM798
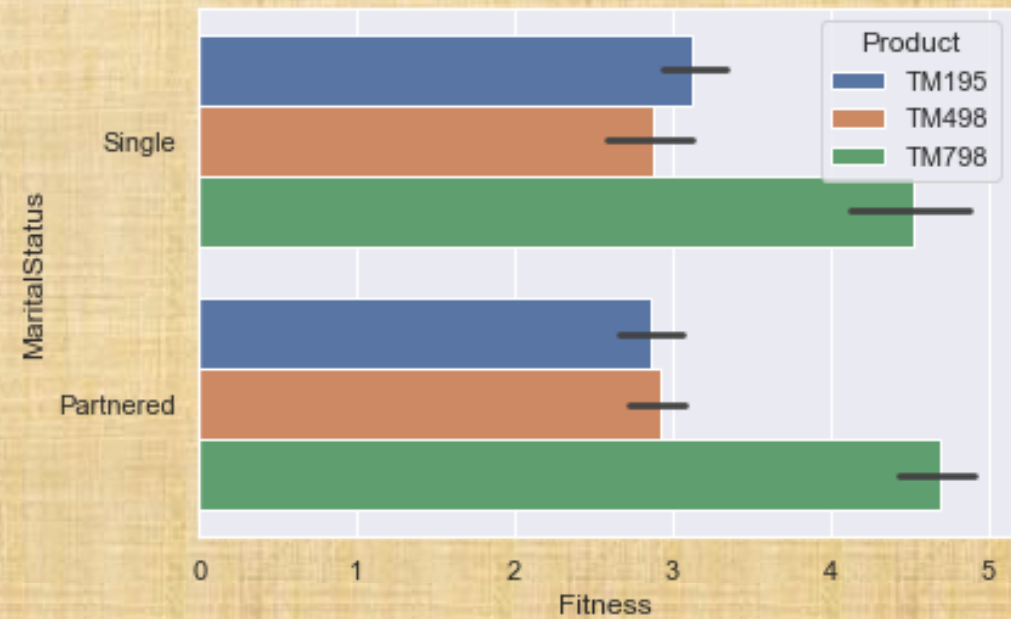
CORRELATION BETWEEN NUMERICAL VARIABLES

	Age	Education	Usage	Fitness	Income	Miles
Age	1.000000	0.280496	0.015064	0.061105	0.513414	0.036618
Education	0.280496	1.000000	0.395155	0.410581	0.625827	0.307284
Usage	0.015064	0.395155	1.000000	0.668606	0.519537	0.759130
Fitness	0.061105	0.410581	0.668606	1.000000	0.535005	0.785702
Income	0.513414	0.625827	0.519537	0.535005	1.000000	0.543473
Miles	0.036618	0.307284	0.759130	0.785702	0.543473	1.000000

PAIRPLOT

HEATMAP OF NUMERICAL VARIABLES

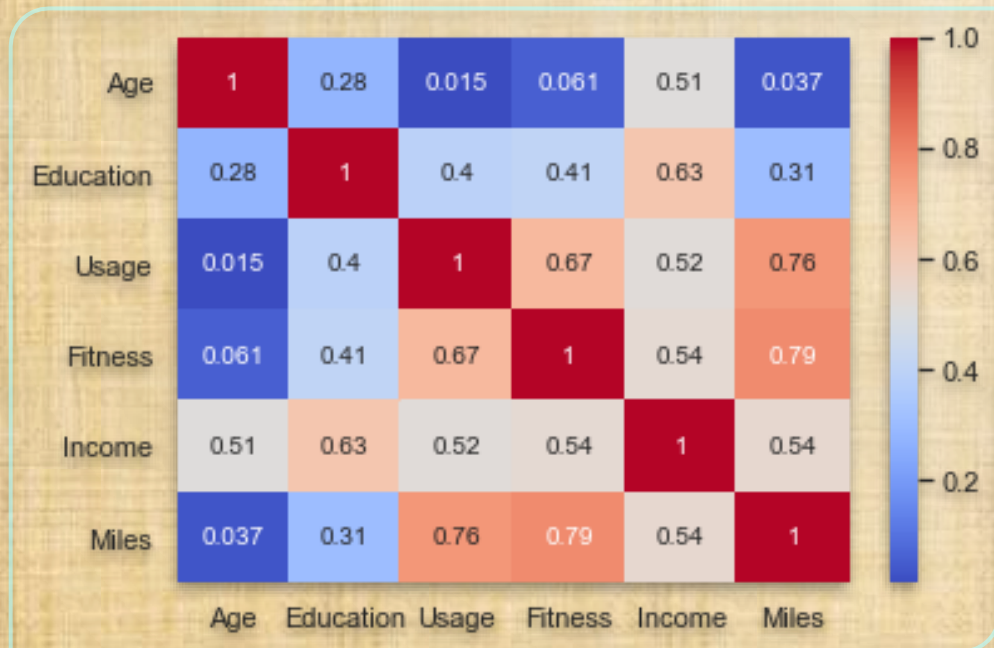- There is high correlation between miles and usage.

- Fitness is also expected to have a high correlation with miles.

- Positive correlation also exist between fitness and usage.

- Fairly high correlation also exist between income and education.

- No negative correlation exist in map above, although the lowest is usage and age.

Conclusion

- Users of TM798 have the highest fitness

- Users of TM798 have the highest usage

- High fitness is as results of high usage of treadmill not necessarily the brand.

- Clients who barely used the TM195 and TM498 were not deemed fit according to the data.

- Clients with higher education and income preferred the TM798.

- Males were more fit than females irrespective of the brand.

Recommendation

- Target market for the treadmill are males, high education and high income(80K above).
- Company should increase stock of TM798 since that will boost sales.

- Must look into the reason why owners of TM798 use their treadmill ,whether its easy to operate or exercise or it has more enhanced features.

- There could be further investigation into how long clients have used their treadmill or which year it was purchased.

- There should also be data on location of clients since that can also impact sales and the use of treadmill.

- Information on discount on purchases and replacement should be available.