aerofit-3

November 22, 2023

AEROFIT CASE STUDY

Problem Statement: The problem at hand involves understanding the factors that influence customers' decisions to purchase specific treadmill products (KP281, KP481, or KP781). The dataset provides information on various customer attributes, and the goal is to gain insights that can inform marketing strategies, product development, and customer engagement.

Basic Metrics for Analysis:

Product Distribution:

Analyze the distribution of purchases among the three treadmill products (KP281, KP481, KP781). Calculate the percentage of customers for each product.

Age Distribution:

Explore the age distribution of customers. Identify the average age, the age range with the highest number of customers, and any notable patterns.

Gender Distribution:

Examine the gender distribution among customers. Calculate the percentage of male and female customers.

Education Levels:

Investigate the distribution of education levels among customers. Identify the most common education level and any correlations with product purchases.

Marital Status:

Analyze the distribution of marital status (single or partnered) among customers. Explore whether marital status influences product choices.

Usage Plans:

Study the distribution of the average number of times customers plan to use the treadmill each week. Identify patterns and preferences in usage frequency.

Income Levels:

Explore the distribution of annual incomes among customers. Identify income brackets and analyze their correlation with product purchases.

Fitness Ratings:

Examine the self-rated fitness levels of customers on a scale of 1 to 5. Identify the most common fitness level and explore if fitness ratings correlate with product choices.

Expected Weekly Mileage:

Analyze the distribution of the average number of miles customers expect to walk/run each week. Identify patterns and preferences in expected weekly mileage.

```
[]: import numpy as np
     import pandas as pd
     import matplotlib.pyplot as plt
     import seaborn as sns
     import warnings
     warnings.filterwarnings("ignore")
[]: #importing the data
     data=pd.read_csv("/content/aerofit_treadmill.csv")
[]: data.head()
                    Gender Education MaritalStatus Usage Fitness
[]:
       Product Age
                                                                        Income Miles
         KP281
                 18
                       Male
                                     14
                                               Single
                                                           3
                                                                         29562
                                                                                   112
     0
         KP281
                                                           2
                                                                                   75
                       Male
                                     15
                                               Single
                                                                     3
                                                                         31836
     1
                 19
                    Female
                                            Partnered
     2
         KP281
                 19
                                     14
                                                           4
                                                                     3
                                                                         30699
                                                                                   66
     3
         KP281
                 19
                       Male
                                     12
                                               Single
                                                            3
                                                                     3
                                                                         32973
                                                                                   85
         KP281
                 20
                       Male
                                     13
                                            Partnered
                                                            4
                                                                     2
                                                                         35247
                                                                                   47
[]: df=data.copy()
    df.head()
Г1:
       Product
                     Gender
                             Education MaritalStatus Usage
                                                             Fitness
                                                                        Income
                                                                                Miles
                Age
         KP281
                       Male
                                     14
                                                           3
                                                                         29562
     0
                 18
                                               Single
                                                                                   112
                                     15
                                                           2
                                                                                   75
     1
         KP281
                 19
                       Male
                                               Single
                                                                     3
                                                                         31836
     2
         KP281
                 19
                     Female
                                     14
                                            Partnered
                                                           4
                                                                     3
                                                                         30699
                                                                                   66
         KP281
                                                            3
     3
                 19
                       Male
                                     12
                                               Single
                                                                     3
                                                                         32973
                                                                                   85
         KP281
                                            Partnered
                                                            4
                                                                     2
     4
                 20
                       Male
                                     13
                                                                         35247
                                                                                   47
[]: #Shape of data
     print(f"The shape of the give data is :{df.shape}")
    The shape of the give data is :(180, 9)
[]: df.info()
    <class 'pandas.core.frame.DataFrame'>
    RangeIndex: 180 entries, 0 to 179
    Data columns (total 9 columns):
         Column
                         Non-Null Count Dtype
```

```
Product
                                         object
     0
                         180 non-null
     1
         Age
                         180 non-null
                                         int64
     2
         Gender
                         180 non-null
                                         object
     3
         Education
                         180 non-null
                                         int64
     4
         MaritalStatus 180 non-null
                                         object
     5
         Usage
                         180 non-null
                                         int64
     6
         Fitness
                         180 non-null
                                         int64
     7
         Income
                         180 non-null
                                         int64
         Miles
                         180 non-null
                                         int64
    dtypes: int64(6), object(3)
    memory usage: 12.8+ KB
[]: # data types of all the attributes
     data_types = df.dtypes
     print("Data types :")
     print(data_types)
    Data types :
    Product
                      object
                       int64
    Age
    Gender
                      object
    Education
                       int64
    MaritalStatus
                      object
                       int64
    Usage
    Fitness
                       int64
    Income
                       int64
    Miles
                       int64
    dtype: object
[]: #conversion of categorical attributes to 'category'
     catergorical_attributes = ["Gender", "Product", "MaritalStatus"]
     for category in categorical_attributes:
         df[category] = df[category].astype('category')
```

With the help of astype("category") we can convert the required attributes into the categorical attributes. Here we have converted the Gender, Product, Marital Status into categorical attributes

[]: df.dtypes

```
[]: Product category
Age int64
Gender category
Education int64
MaritalStatus category
Usage int64
Fitness int64
```

Income int64 Miles int64

dtype: object

```
[]: #statistical summary df.describe()
```

```
[]:
                    Age
                          Education
                                            Usage
                                                      Fitness
                                                                        Income
                                      180.000000
            180.000000
                         180.000000
                                                   180.000000
                                                                   180.000000
     count
             28.788889
                          15.572222
                                        3.455556
                                                     3.311111
                                                                 53719.577778
     mean
                                                     0.958869
                                                                 16506.684226
     std
              6.943498
                            1.617055
                                        1.084797
     min
             18.000000
                          12.000000
                                        2.000000
                                                     1.000000
                                                                 29562.000000
     25%
             24.000000
                          14.000000
                                        3.000000
                                                     3.000000
                                                                 44058.750000
     50%
             26.000000
                          16.000000
                                        3.000000
                                                     3.000000
                                                                 50596.500000
     75%
             33.000000
                          16.000000
                                        4.000000
                                                     4.000000
                                                                 58668.000000
             50.000000
                          21.000000
                                        7.000000
                                                                104581.000000
     max
                                                     5.000000
                  Miles
            180.000000
     count
     mean
            103.194444
     std
             51.863605
     min
             21.000000
     25%
             66.000000
     50%
             94.000000
            114.750000
     75%
     max
            360.000000
```

With the help of **describe()** we can come to know some basic statistical data like count, mean, std, min, max etc for numerical data. For the given data attributes like **Age, Education, Usage, Fitness, Income, Miles** we got some statistical information.

```
[]: categorical_summary = data[catergorical_attributes].describe()
    categorical_summary
```

```
[]:
             Gender Product MaritalStatus
     count
                180
                         180
                                         180
                  2
                           3
                                           2
     unique
               Male
                       KP281
                                  Partnered
     top
     freq
                104
                          80
                                         107
```

For the **categorical data type** we will come to know the **count, unique**, **top, freq** as the statistical information. The above table describes the statistical data for the categorical attributes Gender, Product, Marital Status.

```
[]: #Non-Graphical Analysis: Value counts and unique attributes df.Product.value_counts()
```

```
[]: KP281 80
    KP481 60
    KP781 40
    Name: Product, dtype: int64
```

For the Product attribute by using value_counts we came to know that **KP281** is **80,KP481** is **60 and KP781** is **40 out of 180**.By this we came to know that The customers are showing much interest in KP281 when compared to KP781.

```
[]: df.Gender.value_counts()
```

[]: Male 104 Female 76

Name: Gender, dtype: int64

By using the value_counts for **Gender attribute** we can conclude that out of 180 the male count is 104 and female count is 76.

```
[]: df.MaritalStatus.value_counts()
```

[]: Partnered 107 Single 73

Name: MaritalStatus, dtype: int64

By using the value_counts for **Marital Status** attribute we can say that out of 180 the Partnered count is 107 and Single count is 73.

```
[]: #unique attributes
age_unique=df.Age.nunique()
print(f"Unique count of Age:{age_unique}")
```

Unique count of Age:32

For the **Age** attribute totally we arer having **32 unique values**

```
[ ]: edu_unique=df.Education.nunique()
    print(f"Unique count of Education:{edu_unique}")
```

Unique count of Education:8

For the Education attribute totally we arer having 8 unique values

```
[]: usg_unique=df.Usage.nunique()
print(f"Unique count of Usage:{usg_unique}")
```

Unique count of Usage:6

For the **Usage** attribute totally we arer having 6 unique values

```
[]: fit_unique=df.Fitness.nunique()
print(f"Unique count of Fitness:{fit_unique}")
```

Unique count of Fitness:5

For the **Fitness** attribute totally we arer having $\bf 5$ unique values . The fitness** range is from 1-5**

```
[ ]: inc_unique=df.Income.nunique()
print(f"Unique count of Income:{inc_unique}")
```

Unique count of Income:62

For the **Income** attribute totally we arer having **62 unique values**. The minimum income is 29562 and the maximum income is 104581

```
[]: mil_unique=df.Miles.nunique()
print(f"Unique count of Miles:{mil_unique}")
```

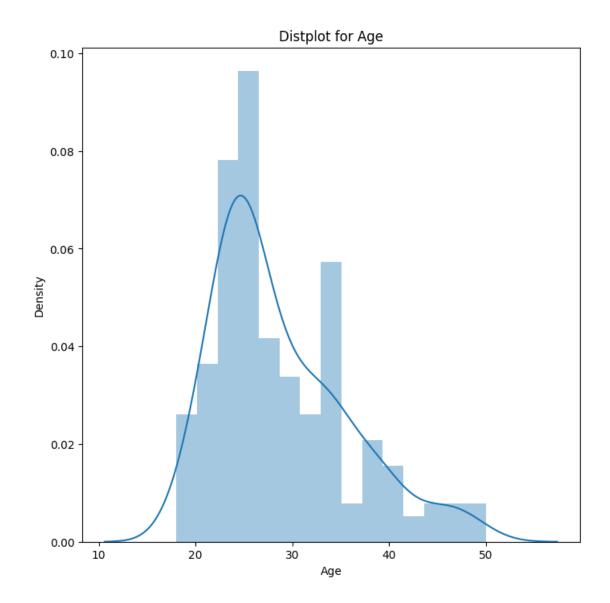
Unique count of Miles:37

For the **Miles** attribute totally we arer having **37 unique values**. The minimum mile is 21 and the maximum mile is 360.

```
[]: #For continuous variable(s): Distplot, countplot, histogram for univariate

→ analysis (10 Points)
```

```
[]: #Distplot
   plt.figure(figsize=(8, 8))
   sns.distplot(df.Age,bins=15,kde=True)
   plt.title('Distplot for Age')
   plt.show()
```

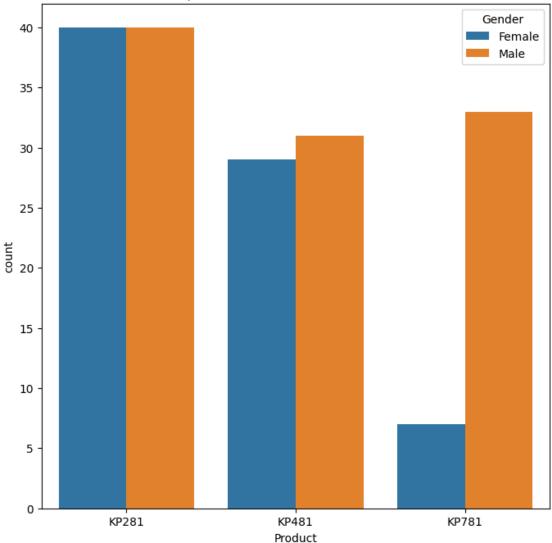


The **distplot** function is designed to display the distribution of a univariate set of observations. Here we created distplot for Age attribute. from this we say that age between 20 and 30 are maximum.

[]:	d:	f.head()								
[]:		Product	Age	Gender	Education	MaritalStatus	Usage	Fitness	Income	Miles
	0	KP281	18	Male	14	Single	3	4	29562	112
	1	KP281	19	Male	15	Single	2	3	31836	75
	2	KP281	19	Female	14	Partnered	4	3	30699	66
	3	KP281	19	Male	12	Single	3	3	32973	85
	4	KP281	20	Male	13	Partnered	4	2	35247	47

```
[]: #countplot
plt.figure(figsize=(8, 8))
sns.countplot(df,x="Product",hue="Gender")
plt.title("Count plot for ProductSales based on Gender")
plt.show()
```

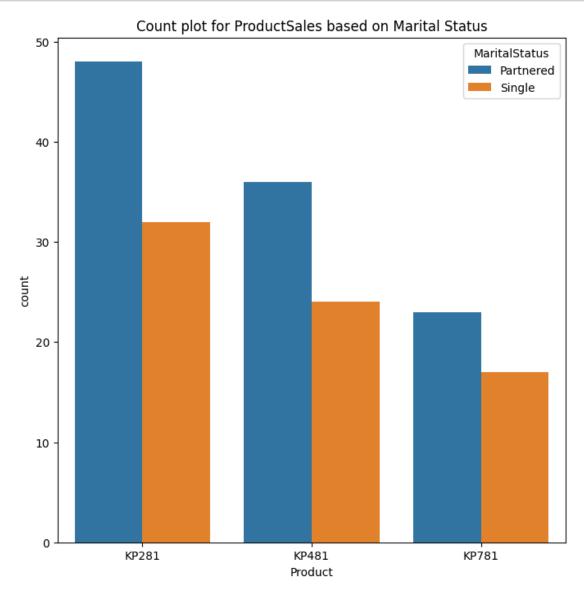




A **countplot** is a type of categorical plot in seaborn that is specifically designed for counting the occurrences of each category in a categorical variable. It provides a simple way to visualize the distribution of categorical data by displaying the count of observations in each category as bars.

Here the countplot represents the ProductSales based on Gender.From this we can say both Males and Females are equal for KP281, where as in KP481 and KP781 the females count is less when compared to men.

```
[]: plt.figure(figsize=(8, 8))
    sns.countplot(df,x="Product",hue="MaritalStatus")
    plt.title("Count plot for ProductSales based on Marital Status")
    plt.show()
```



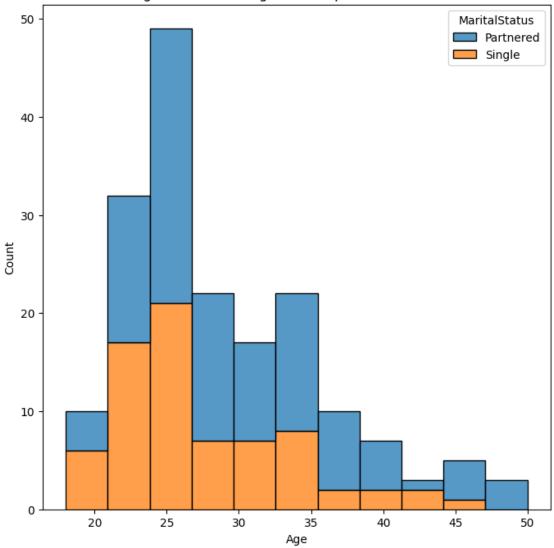
Here the countplot represents the ProductSales based on Marital Status .From this we can say that **Singles are purchasing less when compared to Partnered** in all KP281, KP481 and KP781 . And even Partnered as also purchasing very less KP781 when comapared to other KP481 and KP281.

A histogram is a graphical representation of the distribution of a dataset. It is commonly used to visualize the underlying frequency distribution of a **continuous variable**. In a histogram, the data range is divided into intervals (bins), and the height of each bar represents the frequency or

count of data points falling within that interval.

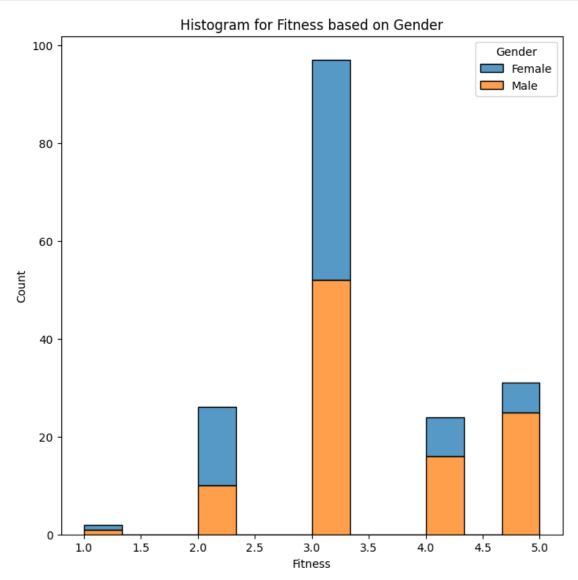
```
[]: #Histogram
plt.figure(figsize=(8, 8))
sns.histplot(data=df,x="Age",hue="MaritalStatus",multiple="stack")
plt.title("Histogram based on Age with respect to marital status.")
plt.show()
```

Histogram based on Age with respect to marital status.



Here we are represting the plot with respect to age, because age is a continuous attribute and based on Marital Status. With the help of stack we have represented the data of both single and partnered in a single graph.

```
[]: plt.figure(figsize=(8, 8))
    sns.histplot(data=df,x="Fitness",hue="Gender",multiple="stack")
    plt.title("Histogram for Fitness based on Gender")
    plt.show()
```



Here we are represting the plot with respect to Fitness, because Fitness is a continuous attribute and based on Gender. With the help of stack we have represented the data of both Male and Female in a single graph. From the above graph we can describe that overall Male are performing better in Fitness when comapared to Women.

```
[]: df.info()
```

<class 'pandas.core.frame.DataFrame'>

RangeIndex: 180 entries, 0 to 179 Data columns (total 9 columns):

#	Column	Non-Null Count	Dtype
0	Product	180 non-null	category
1	Age	180 non-null	int64
2	Gender	180 non-null	category
3	Education	180 non-null	int64
4	MaritalStatus	180 non-null	category
5	Usage	180 non-null	int64
6	Fitness	180 non-null	int64
7	Income	180 non-null	int64
8	Miles	180 non-null	int64
	. (0)		

dtypes: category(3), int64(6)

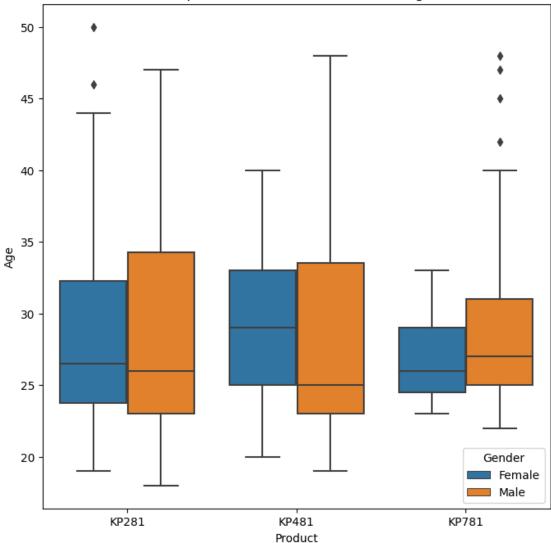
memory usage: 9.5 KB

```
[]: #For categorical variable(s): Boxplot (10 Points)
```

A **Box plot**, also known as a box-and-whisker plot, is a graphical representation that displays the distribution and key statistical properties of a dataset. It provides a concise summary of the central tendency, spread, and presence of outliers in a univariate or grouped dataset.

```
[]: plt.figure(figsize=(8, 8))
    sns.boxplot(data=df,x="Product",y="Age",hue="Gender")
    plt.title("Boxplot for Products based on their Age")
    plt.show()
```

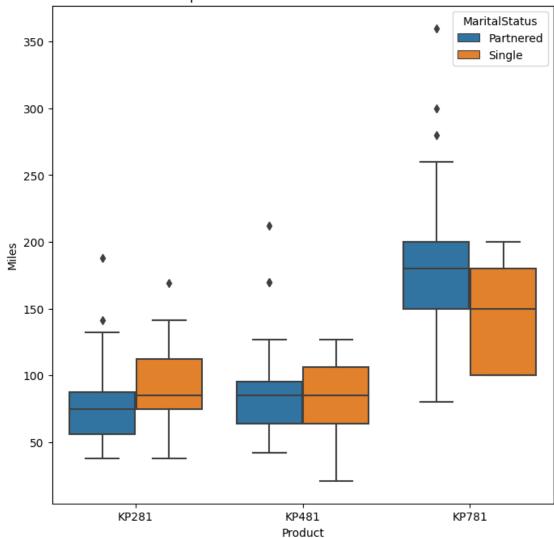




Here the box plot represents the product based on gender. In the above the plot we can see 3 products KP281,KP481 and KP781 for both Male and Female .From this we can say for KP781 for Male we are having more outliers when compared to other products.

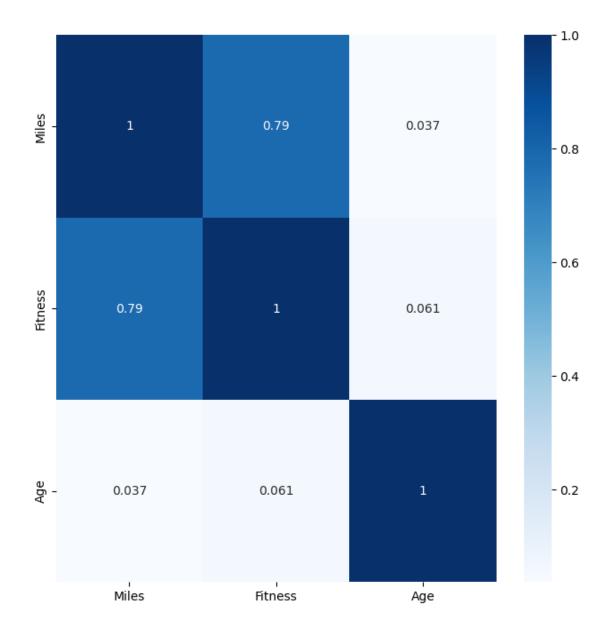
```
[]: plt.figure(figsize=(8, 8))
sns.boxplot(data=df,x="Product",y="Miles",hue="MaritalStatus")
plt.title("Boxplot for Products based on their Miles")
plt.show()
```





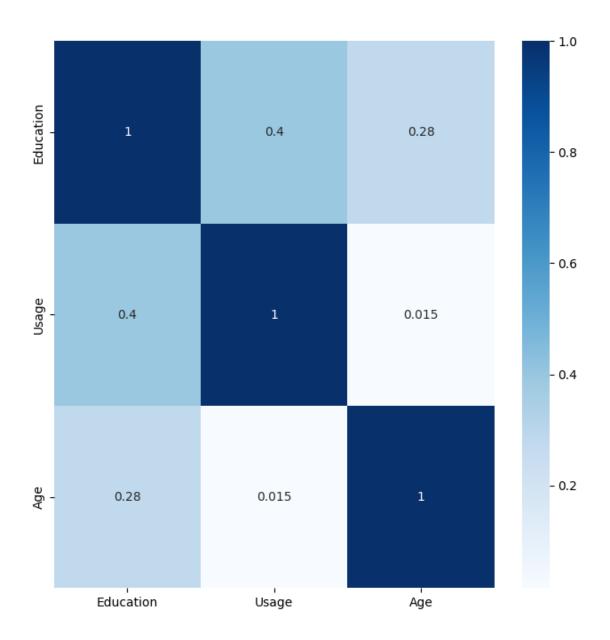
Here the box plot represents the product based on Marital Status. In the above the plot we can see 3 products KP281,KP481 and KP781 for both Single and Partnered . From this we can say for KP781 for Partnered we are having more outliers when compared to other .

```
[]: #For correlation: Heatmaps, Pairplots(10 Points)
plt.figure(figsize=(8, 8))
heat=df[["Miles", "Fitness", "Age"]]
sns.heatmap(heat.corr(), cmap="Blues", annot=True)
plt.show()
```

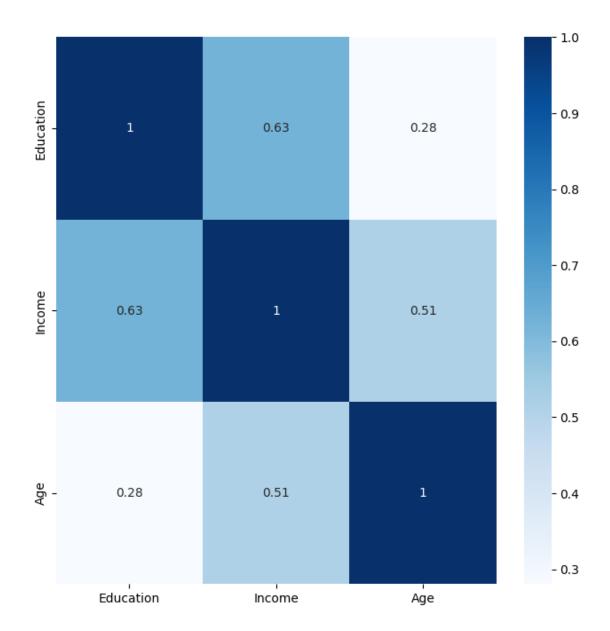


A **heatmap** is a graphical representation of data in a matrix format where values are represented as colors. It is particularly useful for visualizing the magnitude of relationships between two categorical variables or the correlation matrix of numerical variables.

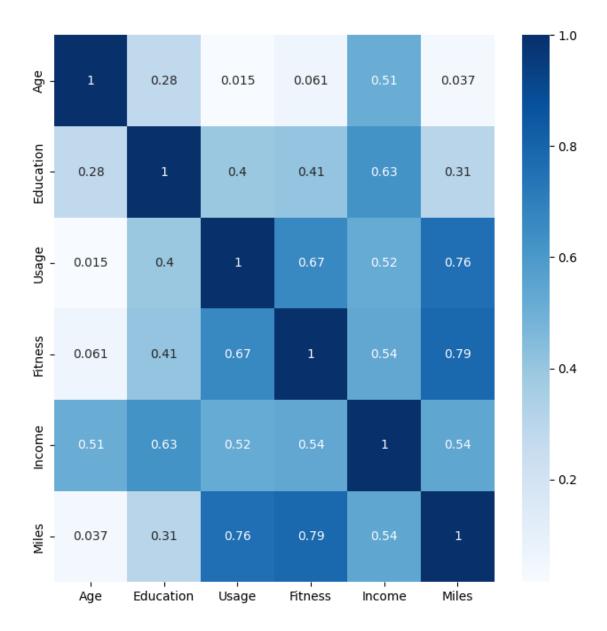
```
[]: plt.figure(figsize=(8, 8))
  heat=df[["Education", "Usage", "Age"]]
  sns.heatmap(heat.corr(),cmap="Blues",annot=True)
  plt.show()
```



```
[]: plt.figure(figsize=(8, 8))
  heat=df[["Education","Income","Age"]]
  sns.heatmap(heat.corr(),cmap="Blues",annot=True)
  plt.show()
```



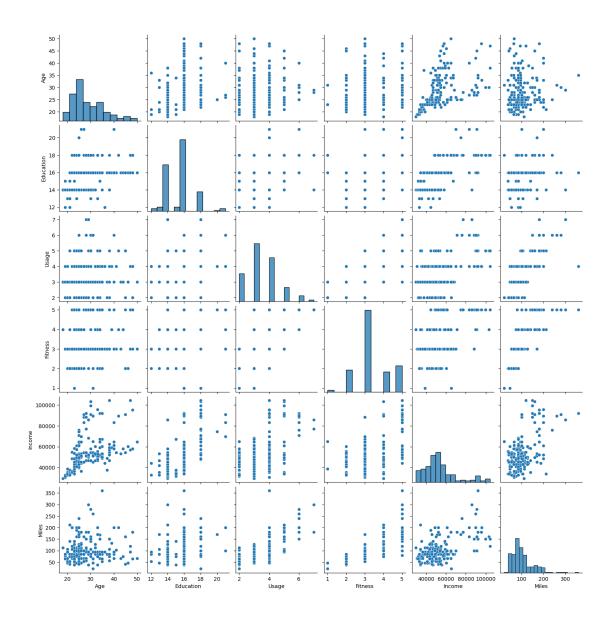
```
[]: plt.figure(figsize=(8, 8))
sns.heatmap(df.corr(),cmap="Blues",annot=True)
plt.show()
```



This is the overall heatmap for the numerical data. By observing this matrix representation we will be getting some basic idea regarding the data.

```
[]: #Pairplots
sns.pairplot(data=df)
```

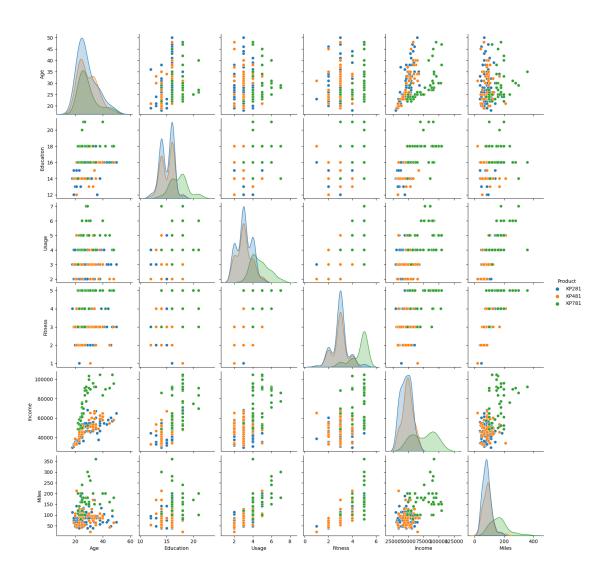
[]: <seaborn.axisgrid.PairGrid at 0x7e5a9c3803d0>



A pair plot (or pairs plot) is a type of scatterplot matrix that provides a quick visual overview of the relationships between pairs of variables in a dataset. It is particularly useful for identifying patterns, correlations, and potential trends in multivariate data.

```
[]: sns.pairplot(data=df,hue="Product")
```

[]: <seaborn.axisgrid.PairGrid at 0x7e5a9b1aa0e0>



```
[]: #Missing Value
```

```
[]: missing_values = df.isnull().sum()
print("Missing Values in the given data:")
missing_values
```

Missing Values in the given data:

[]: Product 0
Age 0
Gender 0
Education 0
MaritalStatus 0
Usage 0
Fitness 0

 $\begin{array}{cc} \text{Income} & & 0 \\ \text{Miles} & & 0 \\ \end{array}$

dtype: int64

With the help of **isnull()** we can the null values.By observing this we can say that their are no null values or missing values in the given data.

```
[]: #Representing the marginal probability like - what percent of customers have purchased KP281, KP481, or KP781 in a table (can use pandas.crosstab here)
```

```
[]: df[df.Gender=="Male"]["Product"].value_counts(normalize=True)
```

[]: KP281 0.384615 KP781 0.317308 KP481 0.298077

Name: Product, dtype: float64

By observing this data we can say that probablity of men buying the Product threadmills are 0.38 for KP281, 0.29 for KP481 and 0.31 for KP781.

By this data we can say that the men were showing much intrest in buying the KP281 abd followed by KP781.

CROSS TAB:One of the most useful tools in Pandas for analyzing tabular data is the crosstab() function.

Cross tabulation (or crosstab) is an important tool for analyzing two categorical variables in a dataset. It provides a tabular summary of the frequency distribution of two variables, allowing us to see the relationship between them and identify any patterns or trends.

normalize: An optional parameter that specifies whether to normalize the frequency table by dividing the values by the grand total. If set to True, the function will normalize the table by dividing each value by the sum of all values

margins: the function will add a row and a column to the table that show the marginal totals.

[]: pd.crosstab(df.Product,df.Gender,normalize=True,margins=True)

[]:	Gender	Female	Male	All
	Product			
	KP281	0.22222	0.22222	0.44444
	KP481	0.161111	0.172222	0.333333
	KP781	0.038889	0.183333	0.22222
	All	0.422222	0.577778	1.000000

By observing the above table we can easily say that both male and female are equally purchasing KP281(0.22), where as for KP481 men(0.16) are purchasing more and even for KP781 men (0.18) are buying more.

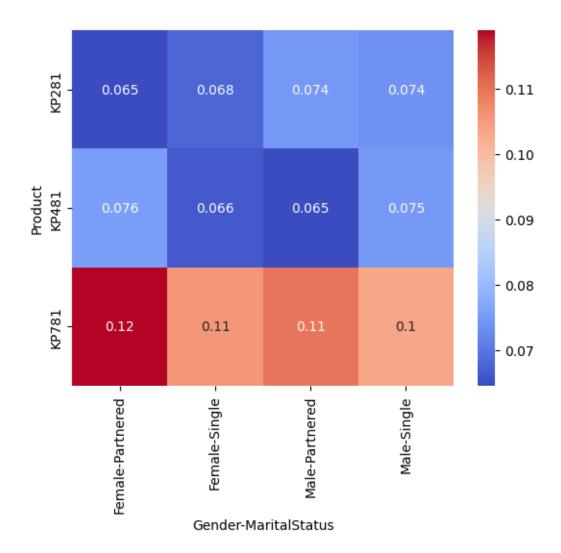
And also the probability of buying KP281 is high and the probability of buying KP781 is low.

The probability of buying Male(0.57) is more than female (0.42)

```
[]: pd.crosstab(df.Product,[df.Gender,df.MaritalStatus],margins=True)
[]: Gender
                      Female
                                         Male
                                                      All
    MaritalStatus Partnered Single Partnered Single
    Product
    KP281
                          27
                                 13
                                           21
                                                       80
    KP481
                          15
                                 14
                                           21
                                                  10
                                                       60
     KP781
                           4
                                  3
                                           19
                                                  14
                                                       40
     All
                          46
                                 30
                                           61
                                                  43 180
[]: pd.crosstab(df.Product,[df.Gender,df.MaritalStatus],normalize=True)
[]: Gender
                      Female
                                            Male
     MaritalStatus Partnered
                                Single Partnered
                                                    Single
    Product
    KP281
                    0.150000 0.072222 0.116667
                                                  0.105556
    KP481
                    0.083333 0.077778 0.116667
                                                  0.055556
     KP781
                    0.022222 0.016667 0.105556
                                                  0.077778
[]: m=pd.crosstab(df.Product,[df.Gender,df.MaritalStatus],values=df.
```

[]: sns.heatmap(m,cmap="coolwarm",annot=True)

[]: <Axes: xlabel='Gender-MaritalStatus', ylabel='Product'>



The above heatmap represents the probability of buying the product with respect to Gender and Marital Status.

[]: pd.crosstab(df.Product,df.Gender,normalize=True,margins=True)

[]:	Gender	Female	Male	All
	Product			
	KP281	0.22222	0.22222	0.44444
	KP481	0.161111	0.172222	0.333333
	KP781	0.038889	0.183333	0.22222
	All	0.422222	0.577778	1.000000

[]: pd.crosstab(df.Product,df.MaritalStatus,normalize=True,margins=True)

```
Product
    KP281
                    0.266667 0.177778 0.444444
    KP481
                    0.200000 0.133333 0.333333
    KP781
                    0.127778 0.094444 0.222222
    All
                    0.594444 0.405556 1.000000
[]: #With all the above steps you can answer questions like: What is the
      ⇔probability of a male customer buying a KP781 treadmill?
[]: #What is the probability of a male customer buying a KP781 treadmill?
[]: a=(len(df[(df.Gender=="Male") & (df.Product=="KP781")]))
    b=(len(df[(df.Gender=="Male")]))
    c=a/b
    print(f"P(KP781|M)={c}")
    P(KP781|M)=0.3173076923076923
[]: #What is the probability of a female customer buying a KP781 treadmill?
[]: a=(len(df[(df.Gender=="Female") & (df.Product=="KP781")]))
    b=(len(df[(df.Gender=="Female")]))
    c=a/b
    print(f"The probability of female buying KP781 is :{c}")
    The probability of female buying KP781 is :0.09210526315789473
[]: a=(len(df[(df.MaritalStatus=="Partnered") & (df.Product=="KP781")]))
    b=(len(df[(df.MaritalStatus=="Partnered")]))
    print(f"The probability of partnered buying KP781 is : {c}")
    The probability of partnered buying KP781 is: 0.21495327102803738
[]: a=(len(df[(df.MaritalStatus=="Single") & (df.Product=="KP781")]))
    b=(len(df[(df.MaritalStatus=="Single")]))
    c=a/b
    print(f"The probability of singles buying KP781 is :{c}")
    The probability of singles buying KP781 is :0.2328767123287671
[]: a=(len(df[(df.MaritalStatus=="Single") & ((df.Product=="KP781")|(df.
      →Product=="KP481"))]))
    b=(len(df[(df.MaritalStatus=="Single")]))
    print(f"The probability of single buying KP781 or KP481 is :{c}")
```

Single

A11

[]: MaritalStatus Partnered

The probability of single buying KP781 or KP481 is :0.5616438356164384

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[]: #Given that a customer is male, what is the probability that they have a
      ⇔fitness level of 4 or 5
[]: a=(len(df[((df.Fitness==4) | (df.Fitness==5))&(df.Gender=="Male")]))
     b=(len(df[(df.Gender=="Male")]))
     print(f"The probability of male for the fitness level 4 or 5 is :{c}")
    The probability of male for the fitness level 4 or 5 is :0.3942307692307692
[]: \#If a customer is under 30 years old, what is the probability that they
      ⇒purchase product KP481
[]: a=(len(df[(df.Product=="KP481")\&(df.Age<=30)]))
     b=(len(df[(df.Age<=30)]))
     c=a/b
     print(f"The probability of purchasing product KP481 age under 30 years are :
      <{c}")</pre>
    The probability of purchasing product KP481 age under 30 years are
    :0.2916666666666667
[]: #Given that a customer is over 40 years old, what is the probability that they
      →have an income over $50,000?
[]: a=(len(df[(df.Income>=50000)&(df.Age>=40)]))
     b=(len(df[(df.Age>=40)]))
     print(f"The probability of having income more than $50000 more than age of 40_{\sqcup}
      ⇔years are :{c}")
    The probability of having income more than $50000 more than age of 40 years are
    :1.0
[]: #What is the probability that a single customer plans to use the treadmill more
      →than 3 times a week?
[]: a=(len(df[(df.MaritalStatus=="Single")&(df.Usage>3)]))
     b=(len(df[(df.Usage>3)]))
     print(f"The probability of Single and Usage of Threadmill is :{c}")
    The probability of Single and Usage of Threadmill is :0.4230769230769231
[]: #If a customer has less than 12 years of education, what is the probability u
      →that they purchase product KP281?
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The probability of purchasing of KP281 of education less than 12 :0.6666666666666666

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[]: #Given that a customer has an income between $50,000 and $70,000, what is the probability that they are in excellent shape (fitness level 5)
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[]: a=(len(df[((df.Income>=50000)&(df.Income<=70000))&(df.Fitness==5)]))
b=(len(df[((df.Income>=50000)&(df.Income<=70000))]))
c=a/b
print(f"The probability of Excellent shape of customer who is earning between

→50000 and 700000 :{c}")
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The probability of Excellent shape of customer who is earning between 50000 and 700000 :0.10810810810810

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[]: #If a customer rates their fitness level as 1, what is the probability that they are single?
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[]: a=(len(df[(df.MaritalStatus=="Single")&(df.Fitness==1)]))
b=(len(df[(df.Fitness==1)]))
c=a/b
print(f"The probability of Single for fitnesss level 1 is :{c}")
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The probability of Single for fitnesss level 1 is :0.5

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[]: #Given that a customer is in excellent shape (fitness level 5), what is the probability that they plan to walk/run more than 30 miles a week?
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[]: a=(len(df[(df.Fitness==5)&(df.Miles>=(30*7))]))
    b=(len(df[(df.Fitness==5)]))
    c=a/b
    print(f"The probability of fitnesss level 5 for 30 miles in a week :{c}")
```

The probability of fitnesss level 5 for 30 miles in a week: 0.16129032258064516

Recommendations:

*From the overall data till now i have observed that the people are purchasing KP281 more than KP481 and KP781.

**The probability of female buying the product is KP781 is very low(0.03) when compared to female buying KP281(0.22) and KP481(0.16).

*The people with age less than 30 years are showing 30% intreset in buying the product.

- *The single's usage of threadmill is 42% that means partners are usage of threadmill is mill is high ie is 48% the aerofit company need to concentarte on single to increase the purchases.
- *The education level below 12 are showing much intreset in buying KP281 ie 66%
- *Fitness of a person is good with usage of the product. So the aerofit threadmill can use to this point and explain how the fitness can be increased by using these products and can increase the sales.
- *As the education level is high their is income is also good , so that peopele who are earning good income the aerofit can motivate them by creating awareness regarding fitness and how they can increase their fitness by usage of their product .
- *The comapny nees to mainly concentrate on single sbuying the product Because singles are buying very less product.By creating awarness among the single's the comapnies sales will get increased.
- *By creating awareness among singles and female reagrding the product so that the sales will get increased.

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