Importing Libraries

In [1]:
```
import pandas as pd
import seaborn as sns
import numpy as np
import matplotlib.pyplot as plt
import math as m
```

Reading DataSet

In [2]:
```
df=pd.read_csv("starbucks.csv")
```

Understanding the DataSet

```
A Starbucks dataset can provide valuable insights and information about
various aspects related to Starbucks operations, customers, products, and
more.Analysis of sales data over time, peak hours, popular items, and
revenue trends across different store locations.Overall, a Starbucks dataset
can offer a comprehensive understanding of various aspects of the business,
allowing for data-driven decisions to improve operations, enhance customer
satisfaction, and drive business growth.
```

In [3]:
```
df
```

Out[3]:

	Beverage_category	Beverage	Beverage_prep	Calories	Total Fat (g)	Trans Fat (g)	Saturated Fat (g)	Sodium (mg)
0	Coffee	Brewed Coffee	Short	3	0.1	0.0	0.0	0
1	Coffee	Brewed Coffee	Tall	4	0.1	0.0	0.0	0
2	Coffee	Brewed Coffee	Grande	5	0.1	0.0	0.0	0
3	Coffee	Brewed Coffee	Venti	5	0.1	0.0	0.0	0
4	Classic Espresso Drinks	Caffè Latte	Short Nonfat Milk	70	0.1	0.1	0.0	5
...	...	...	...	...	...	...	...	...
237	Frappuccino® Blended Crème	Strawberries & Crème (Without Whipped Cream)	Soymilk	320	3 2	0.4	0.0	0
238	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Tall Nonfat Milk	170	0.1	0.1	0.0	0
239	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Whole Milk	200	3.5	2.0	0.1	10
240	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Soymilk	180	1.5	0.2	0.0	0
241	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Grande Nonfat Milk	240	0.1	0.1	0.0	5

242 rows × 18 columns

Analyze of Data

In [10]:
```
df.info
```

Out[10]:

```
<bound method DataFrame.info of              Beverage_category
Beverage  \
0                          Coffee                                  Brewed Coffee
1                          Coffee                                  Brewed Coffee
2                          Coffee                                  Brewed Coffee
3                          Coffee                                  Brewed Coffee
4         Classic Espresso Drinks                                    Caffè Latte
..                            ...                                            ...
237  Frappuccino® Blended Crème  Strawberries & Crème (Without Whipped Cream)
238  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)
239  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)
240  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)
241  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)

          Beverage_prep  Calories  Total Fat (g)  Trans Fat (g)   \
0                 Short         3            0.1             0.0
1                  Tall         4            0.1             0.0
2                Grande         5            0.1             0.0
3                 Venti         5            0.1             0.0
4     Short Nonfat Milk        70            0.1             0.1
..                  ...       ...            ...             ...
237             Soymilk       320            3 2             0.4
238    Tall Nonfat Milk       170            0.1             0.1
239          Whole Milk       200            3.5             2.0
240             Soymilk       180            1.5             0.2
241  Grande Nonfat Milk       240            0.1             0.1

     Saturated Fat (g)   Sodium (mg)   Total Carbohydrates (g)   \
0                  0.0             0                         5
1                  0.0             0                        10
2                  0.0             0                        10
3                  0.0             0                        10
4                  0.0             5                        75
..                 ...           ...                       ...
237                0.0             0                       250
238                0.0             0                       160
239                0.1            10                       160
240                0.0             0                       160
241                0.0             5                       230

     Cholesterol (mg)   Dietary Fibre (g)   Sugars (g)   Protein (g)   \
0                   0                   0            0           0.3
1                   0                   0            0           0.5
2                   0                   0            0           1.0
3                   0                   0            0           1.0
4                  10                   0            9           6.0
..                ...                 ...          ...           ...
237                67                   1           64           5.0
238                39                   0           38           4.0
239                39                   0           38           3.0
240                37                   1           35           3.0
241                56                   0           55           5.0

    Vitamin A (% DV)  Vitamin C (% DV)  Calcium (% DV)  Iron (% DV)   \
0                 0%                0%              0%          0%
1                 0%                0%              0%          0%
2                 0%                0%              0%          0%
```

3	0%	0%	2%	0%
4	10%	0%	20%	0%
..	...	...	...	...
237	6%	8%	20%	10%
238	6%	0%	10%	0%
239	6%	0%	10%	0%
240	4%	0%	10%	6%
241	8%	0%	15%	0%

	Caffeine (mg)
0	175
1	260
2	330
3	410
4	75
..	...
237	0
238	0
239	0
240	0
241	0

[242 rows x 18 columns]>

In [45]:
```
# Generating descriptive statistics for numerical columns.
df.describe
```

Out[45]:

```
<bound method NDFrame.describe of              Beverage_category
Beverage  \
0                         Coffee                                  Brewed Coffee
1                         Coffee                                  Brewed Coffee
2                         Coffee                                  Brewed Coffee
3                         Coffee                                  Brewed Coffee
4         Classic Espresso Drinks                                    Caffè Latte
..                            ...                                            ...
237  Frappuccino® Blended Crème  Strawberries & Crème (Without Whipped Cream)
238  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)
239  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)
240  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)
241  Frappuccino® Blended Crème          Vanilla Bean (Without Whipped Cream)

          Beverage_prep  Calories  Total Fat (g)  Trans Fat (g)   \
0                 Short         3            0.1             0.0
1                  Tall         4            0.1             0.0
2                Grande         5            0.1             0.0
3                 Venti         5            0.1             0.0
4     Short Nonfat Milk        70            0.1             0.1
..                  ...       ...            ...             ...
237             Soymilk       320            3 2             0.4
238    Tall Nonfat Milk       170            0.1             0.1
239          Whole Milk       200            3.5             2.0
240             Soymilk       180            1.5             0.2
241  Grande Nonfat Milk       240            0.1             0.1

     Saturated Fat (g)   Sodium (mg)   Total Carbohydrates (g)   \
0                  0.0             0                         5
1                  0.0             0                        10
2                  0.0             0                        10
3                  0.0             0                        10
4                  0.0             5                        75
..                 ...           ...                       ...
237                0.0             0                       250
238                0.0             0                       160
239                0.1            10                       160
240                0.0             0                       160
241                0.0             5                       230

     Cholesterol (mg)   Dietary Fibre (g)   Sugars (g)   Protein (g)   \
0                   0                   0            0           0.3
1                   0                   0            0           0.5
2                   0                   0            0           1.0
3                   0                   0            0           1.0
4                  10                   0            9           6.0
..                ...                 ...          ...           ...
237                67                   1           64           5.0
238                39                   0           38           4.0
239                39                   0           38           3.0
240                37                   1           35           3.0
241                56                   0           55           5.0

    Vitamin A (% DV)  Vitamin C (% DV)  Calcium (% DV)  Iron (% DV)   \
0                 0%                0%              0%          0%
1                 0%                0%              0%          0%
2                 0%                0%              0%          0%
```

```
3                  0%                0%                2%                0%
4                 10%                0%               20%                0%
..                ...               ...               ...               ...
237                6%                8%               20%               10%
238                6%                0%               10%                0%
239                6%                0%               10%                0%
240                4%                0%               10%                6%
241                8%                0%               15%                0%

    Caffeine (mg)
0             175
1             260
2             330
3             410
4              75
..            ...
237             0
238             0
239             0
240             0
241             0

[242 rows x 18 columns]>
```

In [13]:
```
df.head()
```

Out[13]:

	Beverage_category	Beverage	Beverage_prep	Calories	Total Fat (g)	Trans Fat (g)	Saturated Fat (g)	Sodium (mg)	Carl
0	Coffee	Brewed Coffee	Short	3	0.1	0.0	0.0	0	
1	Coffee	Brewed Coffee	Tall	4	0.1	0.0	0.0	0	
2	Coffee	Brewed Coffee	Grande	5	0.1	0.0	0.0	0	
3	Coffee	Brewed Coffee	Venti	5	0.1	0.0	0.0	0	
4	Classic Espresso Drinks	Caffè Latte	Short Nonfat Milk	70	0.1	0.1	0.0	5	

In [15]:
```
df.shape
```

Out[15]:
```
(242, 18)
```

In [16]:
```
df.tail()
```

Out[16]:

	Beverage_category	Beverage	Beverage_prep	Calories	Total Fat (g)	Trans Fat (g)	Saturated Fat (g)	Sodium (mg)
237	Frappuccino® Blended Crème	Strawberries & Crème (Without Whipped Cream)	Soymilk	320	3 2	0.4	0.0	0
238	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Tall Nonfat Milk	170	0.1	0.1	0.0	0
239	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Whole Milk	200	3.5	2.0	0.1	10
240	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Soymilk	180	1.5	0.2	0.0	0
241	Frappuccino® Blended Crème	Vanilla Bean (Without Whipped Cream)	Grande Nonfat Milk	240	0.1	0.1	0.0	5

In [17]:
```
df.index
```

Out[17]:
```
RangeIndex(start=0, stop=242, step=1)
```

In [22]:
```
df.columns
```

Out[22]:
```
Index(['Beverage_category', 'Beverage', 'Beverage_prep', 'Calories',
       ' Total Fat (g)', 'Trans Fat (g) ', 'Saturated Fat (g)', ' Sodium (m
g)',
       ' Total Carbohydrates (g) ', 'Cholesterol (mg)', ' Dietary Fibre (g)',
       ' Sugars (g)', ' Protein (g) ', 'Vitamin A (% DV) ', 'Vitamin C (% D
V)',
       ' Calcium (% DV) ', 'Iron (% DV) ', 'Caffeine (mg)'],
      dtype='object')
```

In [24]:
```
df.dtypes
```

Out[24]:
```
Beverage_category            object
Beverage                     object
Beverage_prep                object
Calories                      int64
 Total Fat (g)               object
Trans Fat (g)               float64
Saturated Fat (g)           float64
 Sodium (mg)                  int64
 Total Carbohydrates (g)      int64
Cholesterol (mg)              int64
 Dietary Fibre (g)            int64
 Sugars (g)                   int64
 Protein (g)                float64
Vitamin A (% DV)             object
Vitamin C (% DV)             object
 Calcium (% DV)              object
Iron (% DV)                  object
Caffeine (mg)                object
dtype: object
```

Understanding the Columns

Categorial Data

In [ ]:
```
Beverage_category
Beverage
Beverage_prep
```

Numerical Data

In [ ]:
```
Calories
Total Fat (g)
Trans Fat (g)
Saturated Fat (g)
Sodium (mg)
Total Carbohydrates (g)
Cholesterol (mg)
Dietary Fibre (g)
Sugars (g)
Protein (g)
Vitamin A (% DV)
Vitamin C (% DV)
Calcium (% DV)
Iron (% DV)
Caffeine (mg)
```

Unique and Nunique Data

In [25]:
```
df['Beverage'].unique
```

Out[25]:
```
<bound method Series.unique of 0                                      Brewed C
offee
1                                    Brewed Coffee
2                                    Brewed Coffee
3                                    Brewed Coffee
4                                      Caffè Latte
                              ...
237    Strawberries & Crème (Without Whipped Cream)
238            Vanilla Bean (Without Whipped Cream)
239            Vanilla Bean (Without Whipped Cream)
240            Vanilla Bean (Without Whipped Cream)
241            Vanilla Bean (Without Whipped Cream)
Name: Beverage, Length: 242, dtype: object>
```

In [26]:
```
df.nunique()
```

Out[26]:
```
Beverage_category            9
Beverage                    33
Beverage_prep               13
Calories                    48
 Total Fat (g)              24
Trans Fat (g)               18
Saturated Fat (g)            4
 Sodium (mg)                 9
 Total Carbohydrates (g)    51
Cholesterol (mg)            75
 Dietary Fibre (g)           8
 Sugars (g)                 70
 Protein (g)                26
Vitamin A (% DV)            11
Vitamin C (% DV)            10
 Calcium (% DV)             14
Iron (% DV)                 18
Caffeine (mg)               36
dtype: int64
```

In [27]:
```
df.count()
```

Out[27]:
```
Beverage_category           242
Beverage                    242
Beverage_prep               242
Calories                    242
 Total Fat (g)              242
Trans Fat (g)               242
Saturated Fat (g)           242
 Sodium (mg)                242
 Total Carbohydrates (g)    242
Cholesterol (mg)            242
 Dietary Fibre (g)          242
 Sugars (g)                 242
 Protein (g)                242
Vitamin A (% DV)            242
Vitamin C (% DV)            242
 Calcium (% DV)             242
Iron (% DV)                 242
Caffeine (mg)               241
dtype: int64
```

In [31]:
```
df['Beverage'].value_counts()
```

Out[31]:
```
Tazo® Full-Leaf Red Tea Latte (Vanilla Rooibos)        12
White Chocolate Mocha (Without Whipped Cream)          12
Tazo® Full-Leaf Tea Latte                              12
Tazo® Green Tea Latte                                  12
Tazo® Chai Tea Latte                                   12
Coffee                                                 12
Hot Chocolate (Without Whipped Cream)                  12
Caramel Macchiato                                      12
Cappuccino                                             12
Vanilla Latte (Or Other Flavoured Latte)               12
Caffè Mocha (Without Whipped Cream)                    12
Caffè Latte                                            12
Iced Brewed Coffee (With Milk & Classic Syrup)          9
Caramel (Without Whipped Cream)                         9
Java Chip (Without Whipped Cream)                       9
Mocha (Without Whipped Cream)                           9
Strawberries & Crème (Without Whipped Cream)            9
Brewed Coffee                                           4
Tazo® Tea                                               4
Caramel Apple Spice (Without Whipped Cream)             4
Skinny Latte (Any Flavour)                              4
Caffè Americano                                         4
Vanilla Bean (Without Whipped Cream)                    4
Iced Brewed Coffee (With Classic Syrup)                 3
Shaken Iced Tazo® Tea (With Classic Syrup)              3
Shaken Iced Tazo® Tea Lemonade (With Classic Syrup)     3
Banana Chocolate Smoothie                               3
Orange Mango Banana Smoothie                            3
Strawberry Banana Smoothie                              3
Mocha                                                   3
Caramel                                                 3
Java Chip                                               3
Espresso                                                2
Name: Beverage, dtype: int64
```

Analyzing Beverage

In [35]:
```
df.head(1)
```

Out[35]:

	Beverage_category	Beverage	Beverage_prep	Calories	Total Fat (g)	Trans Fat (g)	Saturated Fat (g)	Sodium (mg)	Carl
0	Coffee	Brewed Coffee	Short	3	0.1	0.0	0.0	0	

In [36]:
```
df.nunique()
```

Out[36]:
```
Beverage_category            9
Beverage                    33
Beverage_prep               13
Calories                    48
 Total Fat (g)              24
Trans Fat (g)               18
Saturated Fat (g)            4
 Sodium (mg)                 9
 Total Carbohydrates (g)    51
Cholesterol (mg)            75
 Dietary Fibre (g)           8
 Sugars (g)                 70
 Protein (g)                26
Vitamin A (% DV)            11
Vitamin C (% DV)            10
 Calcium (% DV)             14
Iron (% DV)                 18
Caffeine (mg)               36
dtype: int64
```

In [39]:
```
df['Beverage_category'].nunique()
```

Out[39]:
```
9
```

In [40]:
```
df['Beverage_category'].unique()
```

Out[40]:
```
array(['Coffee', 'Classic Espresso Drinks', 'Signature Espresso Drinks',
       'Tazo® Tea Drinks', 'Shaken Iced Beverages', 'Smoothies',
       'Frappuccino® Blended Coffee', 'Frappuccino® Light Blended Coffee',
       'Frappuccino® Blended Crème'], dtype=object)
```

Analyzing Calories

In [50]:
```
df.head(4)
```

Out[50]:

	Beverage_category	Beverage	Beverage_prep	Calories	Total Fat (g)	Trans Fat (g)	Saturated Fat (g)	Sodium (mg)	Carl
0	Coffee	Brewed Coffee	Short	3	0.1	0.0	0.0	0	
1	Coffee	Brewed Coffee	Tall	4	0.1	0.0	0.0	0	
2	Coffee	Brewed Coffee	Grande	5	0.1	0.0	0.0	0	
3	Coffee	Brewed Coffee	Venti	5	0.1	0.0	0.0	0	

In [49]:
```
df['Calories'].unique()
```

Out[49]:
```
array([  3,   4,   5,  70, 100, 150, 110, 130, 190, 170, 240, 200, 180,
       220, 260, 230, 280, 340, 290, 160, 250, 210, 320, 270,  10,  15,
        25,  50,  80,  60,  90, 120, 140, 300, 310, 350, 400, 370, 450,
       510, 460, 380, 330, 360,   0, 390, 420, 430], dtype=int64)
```

In [51]:
```
df['Calories'].value_counts()
```

Out[51]:
```
150    11
190    11
180    11
120    10
100    10
130    10
200    10
240     9
110     9
170     9
290     9
80      9
310     8
160     8
260     8
280     7
220     7
210     7
230     6
90      6
350     5
140     5
270     4
0       4
340     4
60      4
5       4
250     4
320     3
370     3
70      3
450     2
330     2
10      2
300     2
50      2
390     2
460     2
360     1
420     1
380     1
3       1
510     1
400     1
25      1
15      1
4       1
430     1
Name: Calories, dtype: int64
```

Null values in Dataset

In [41]:
```
df.isnull().sum()
```

Out[41]:
```
Beverage_category           0
Beverage                    0
Beverage_prep               0
Calories                    0
 Total Fat (g)              0
Trans Fat (g)               0
Saturated Fat (g)           0
 Sodium (mg)                0
 Total Carbohydrates (g)    0
Cholesterol (mg)            0
 Dietary Fibre (g)          0
 Sugars (g)                 0
 Protein (g)                0
Vitamin A (% DV)            0
Vitamin C (% DV)            0
 Calcium (% DV)             0
Iron (% DV)                 0
Caffeine (mg)               1
dtype: int64
```

In [43]:
```
df.notnull().sum()
```

Out[43]:
```
Beverage_category           242
Beverage                    242
Beverage_prep               242
Calories                    242
 Total Fat (g)              242
Trans Fat (g)               242
Saturated Fat (g)           242
 Sodium (mg)                242
 Total Carbohydrates (g)    242
Cholesterol (mg)            242
 Dietary Fibre (g)          242
 Sugars (g)                 242
 Protein (g)                242
Vitamin A (% DV)            242
Vitamin C (% DV)            242
 Calcium (% DV)             242
Iron (% DV)                 242
Caffeine (mg)               241
dtype: int64
```

Exploratory Data Analysis (EDA)

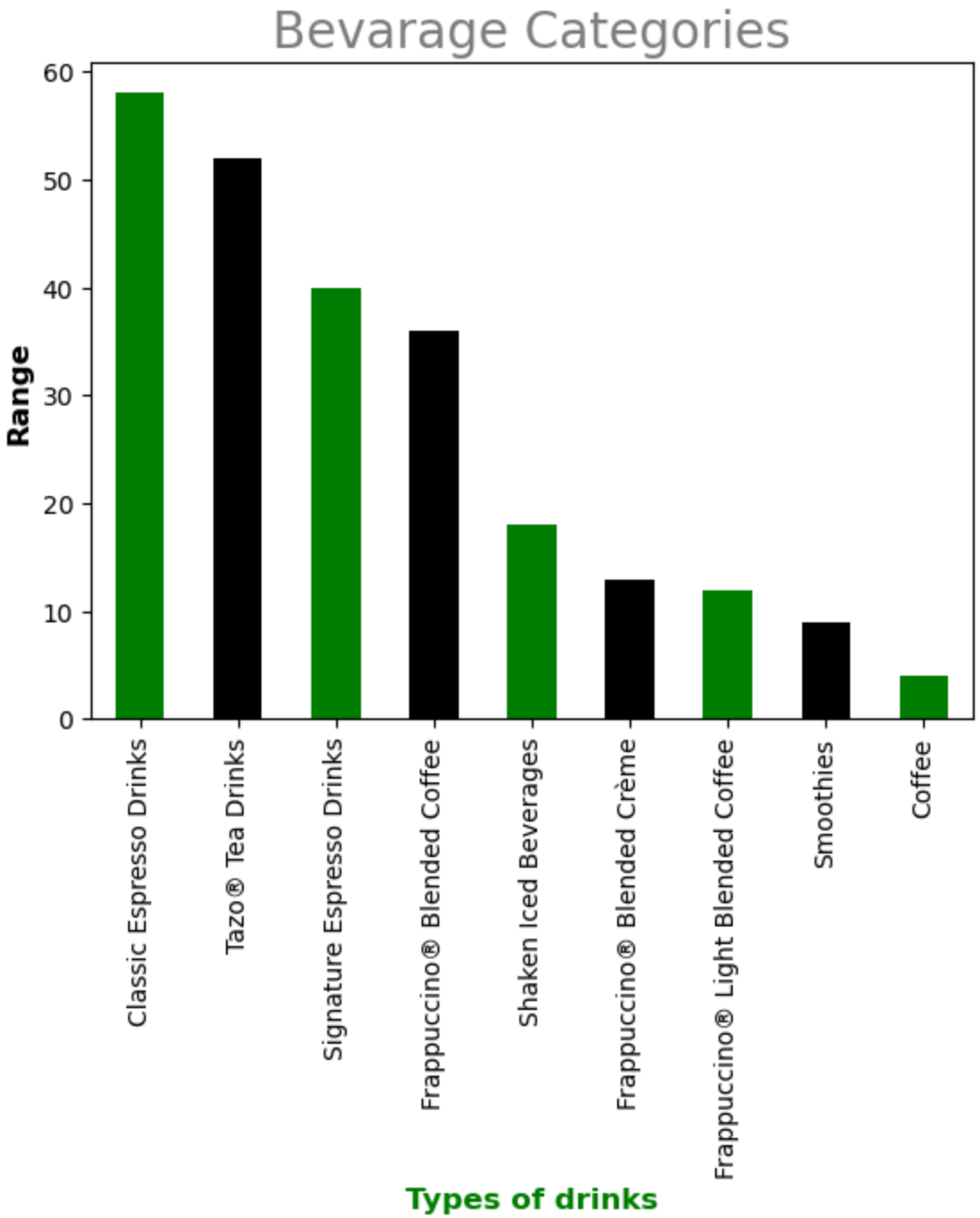
Data Visualisation

In [4]:
```
df.dtypes
```

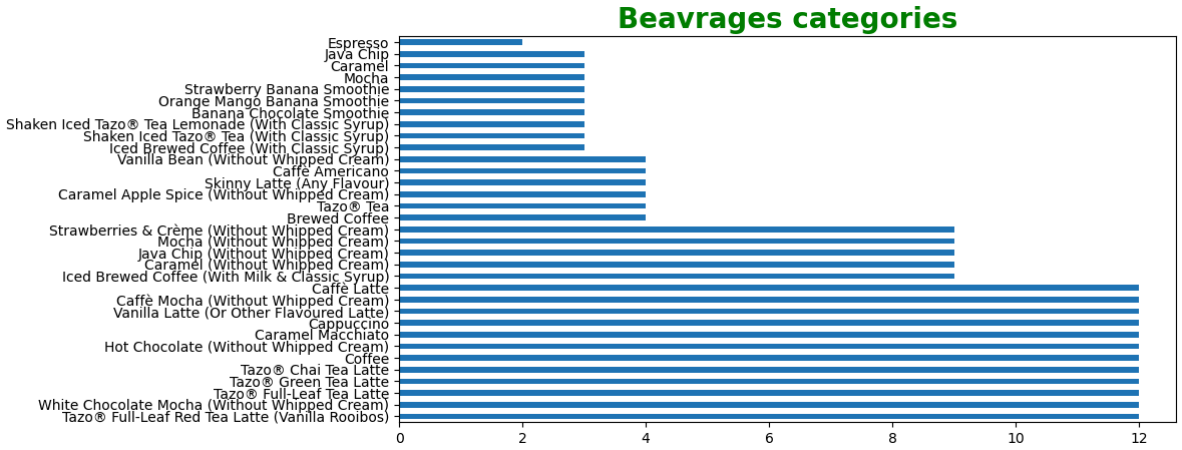
Out[4]:
```
Beverage_category            object
Beverage                     object
Beverage_prep                object
Calories                      int64
 Total Fat (g)               object
Trans Fat (g)               float64
Saturated Fat (g)           float64
 Sodium (mg)                  int64
 Total Carbohydrates (g)      int64
Cholesterol (mg)              int64
 Dietary Fibre (g)            int64
 Sugars (g)                   int64
 Protein (g)                float64
Vitamin A (% DV)             object
Vitamin C (% DV)             object
 Calcium (% DV)              object
Iron (% DV)                  object
Caffeine (mg)                object
dtype: object
```

Bar Plotting

In [17]:
```
df['Beverage_category'].value_counts().plot(kind='bar',color=(['Green','Black'
plt.title('Bevarage Categories',size=20,c='grey')

plt.xlabel('Types of drinks',c='Green',size=12,fontweight='bold')
plt.ylabel('Range',c='black',size=12,fontweight='bold')
plt.show()
```



In [31]:
```
plt.figure(figsize=(10,5))
df['Beverage'].value_counts().plot(kind='barh')
plt.title('Beavrages categories',size=20,c='Green',fontweight='bold')
plt.show()
```



Pie Chart Data Visualisation

In [30]:
```
df['Calories'].value_counts().plot(kind='pie')
plt.title('Calories in Beverages',size=20,c='Green',fontweight='bold')
```

Out[30]: Text(0.5, 1.0, 'Calories in Beverages')

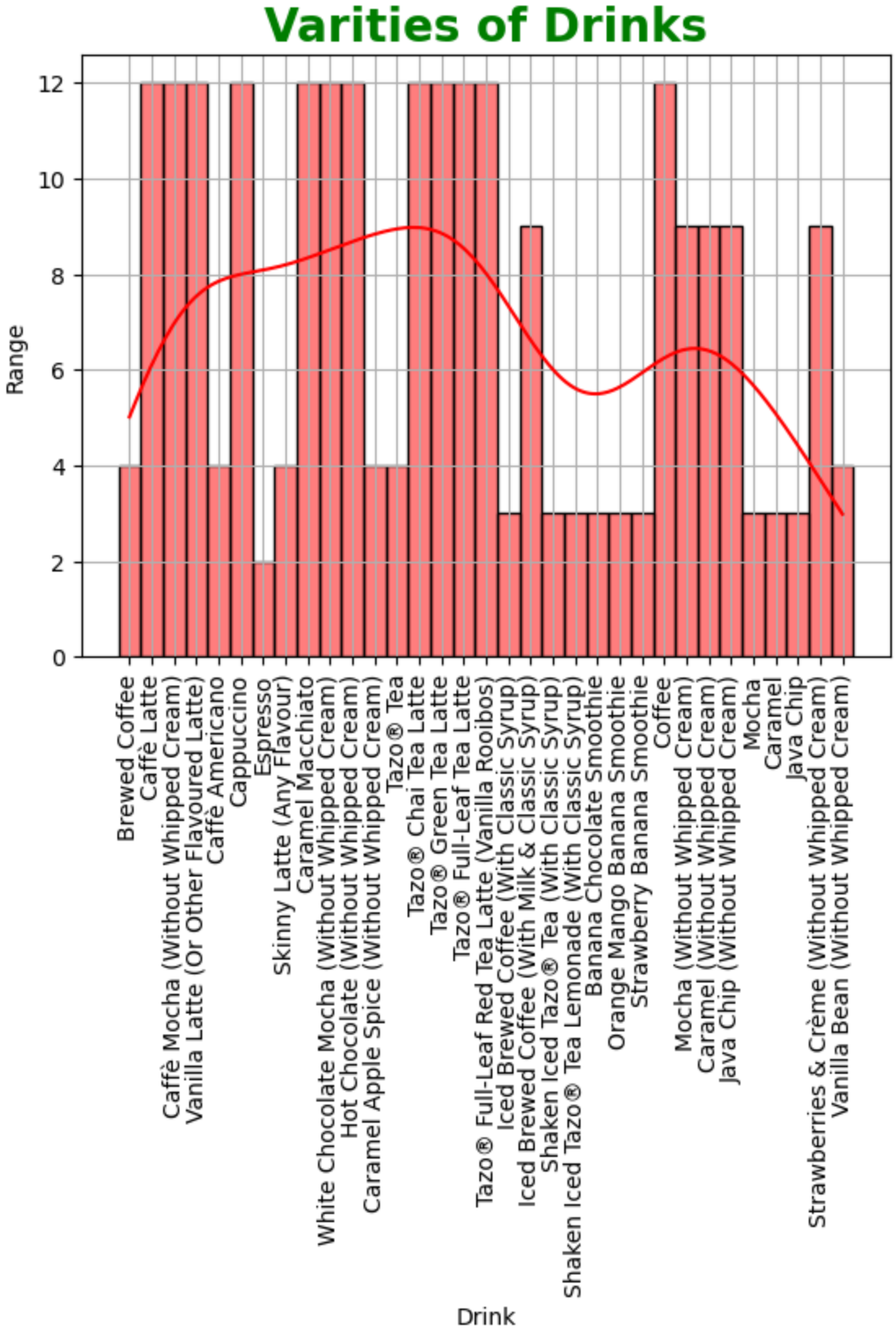
KDE

KDE stands for Kernel Density Estimation, and it's a method used for estimating the probability density function of a random variable. In simpler terms, it's a way to visualize the distribution of data in a continuous manner.

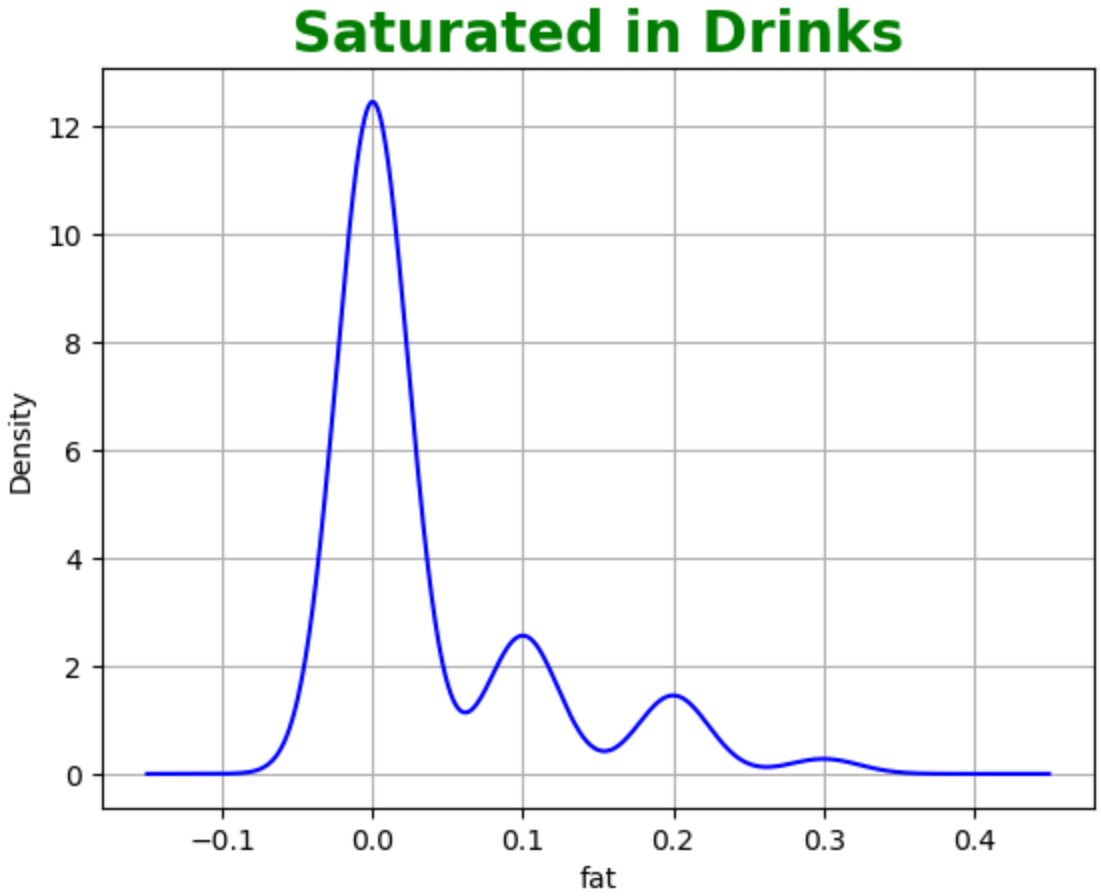
In [27]:
```
df.dtypes
```

Out[27]:
```
Beverage_category            object
Beverage                     object
Beverage_prep                object
Calories                      int64
 Total Fat (g)               object
Trans Fat (g)               float64
Saturated Fat (g)           float64
 Sodium (mg)                  int64
 Total Carbohydrates (g)      int64
Cholesterol (mg)              int64
 Dietary Fibre (g)            int64
 Sugars (g)                   int64
 Protein (g)                float64
Vitamin A (% DV)             object
Vitamin C (% DV)             object
 Calcium (% DV)              object
Iron (% DV)                  object
Caffeine (mg)                object
dtype: object
```

In [29]:
```
sns.histplot(df['Beverage'], kde=True, color='r')
plt.title('Varities of Drinks',size=20,c='Green',fontweight='bold')
plt.xlabel('Drink')
plt.ylabel('Range')
plt.xticks(rotation='vertical',color='Black',fontsize=10)
plt.yticks(color='Black',fontsize=10)
plt.grid()
plt.show()
```


Varities of Drinks
Range
0
2
4
6
8
10
12
Brewed Coffee
Caffè Latte
Caffè Mocha (Without Whipped Cream)
Vanilla Latte (Or Other Flavoured Latte)
Caffè Americano
Cappuccino
Espresso
Skinny Latte (Any Flavour)
Caramel Macchiato
White Chocolate Mocha (Without Whipped Cream)
Hot Chocolate (Without Whipped Cream)
Caramel Apple Spice (Without Whipped Cream)
Tazo® Tea
Tazo® Chai Tea Latte
Tazo® Green Tea Latte
Tazo® Full-Leaf Tea Latte
Tazo® Full-Leaf Red Tea Latte (Vanilla Rooibos)
Iced Brewed Coffee (With Classic Syrup)
Iced Brewed Coffee (With Milk & Classic Syrup)
Shaken Iced Tazo® Tea (With Classic Syrup)
Shaken Iced Tazo® Tea Lemonade (With Classic Syrup)
Banana Chocolate Smoothie
Orange Mango Banana Smoothie
Strawberry Banana Smoothie
Coffee
Mocha (Without Whipped Cream)
Caramel (Without Whipped Cream)
Java Chip (Without Whipped Cream)
Mocha
Caramel
Java Chip
Strawberries & Crème (Without Whipped Cream)
Vanilla Bean (Without Whipped Cream)
Drink

In [27]:
```
df['Saturated Fat (g)'].plot(kind='kde',c='b')
plt.title('Saturated in Drinks',size=20,c='Green',fontweight='bold')
plt.xlabel('fat')
plt.grid()
plt.show()
```

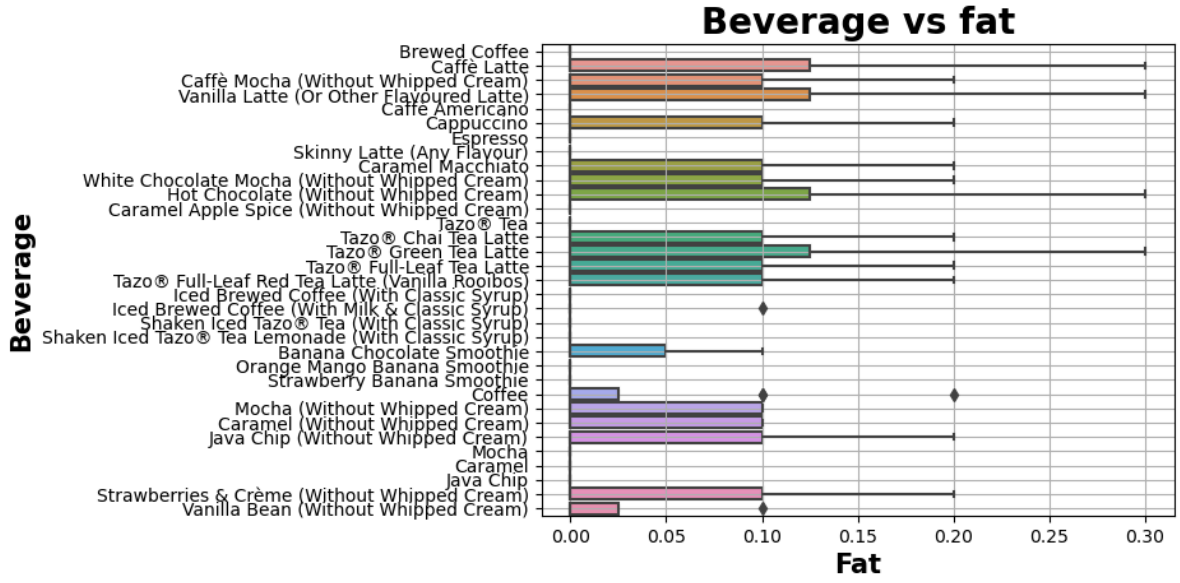


Box Plot

A box plot in Python, created using matplotlib, is a graphical representation of the distribution of a dataset through five key values: minimum, first quartile (Q1), median (second quartile or Q2), third quartile (Q3), and maximum.

Based on Beverage and saturated Fat.

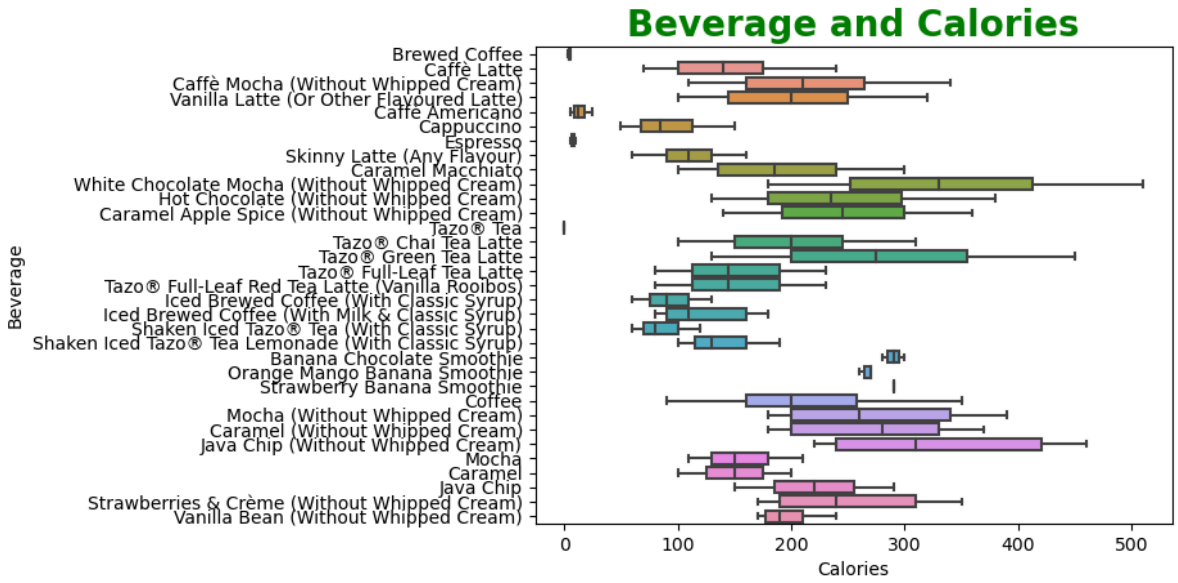
In [48]:
```
sns.boxplot(data=df,y='Beverage',x='Saturated Fat (g)')
plt.xticks(color='k')
plt.yticks(color='k')

plt.title('Beverage vs fat',size=20,c='Black',fontweight='bold')

plt.xlabel('Fat',size=15,fontweight='bold')
plt.ylabel('Beverage',size=15,fontweight='bold')

plt.grid()

plt.show()
```



Based on Beverage and calories.

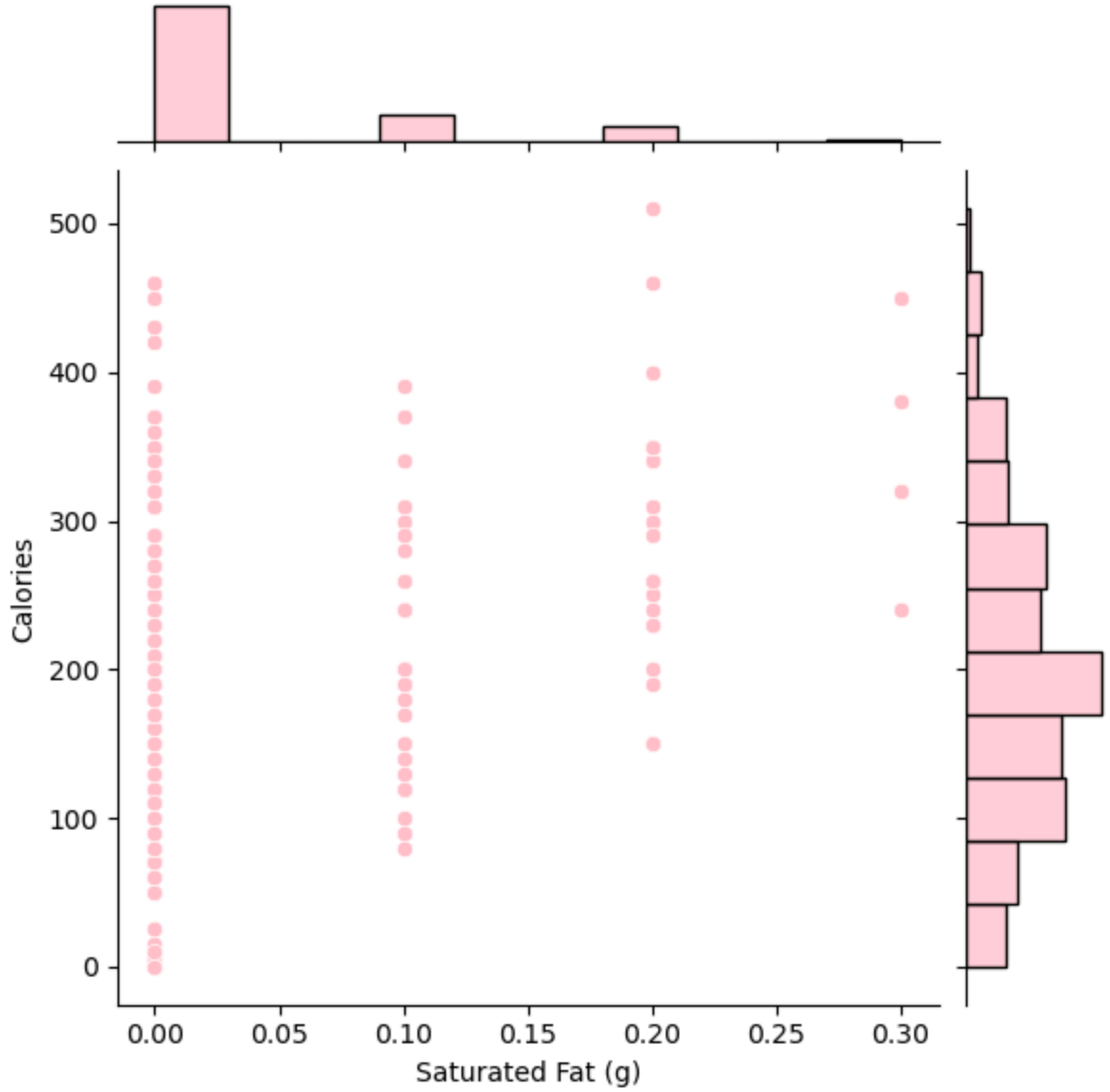
In [25]:
```
sns.boxplot(data=df,y='Beverage',x='Calories')
plt.title('Beverage and Calories',size=20,c='green',fontweight='bold')
```

Out[25]:
```
Text(0.5, 1.0, 'Beverage and Calories')
```

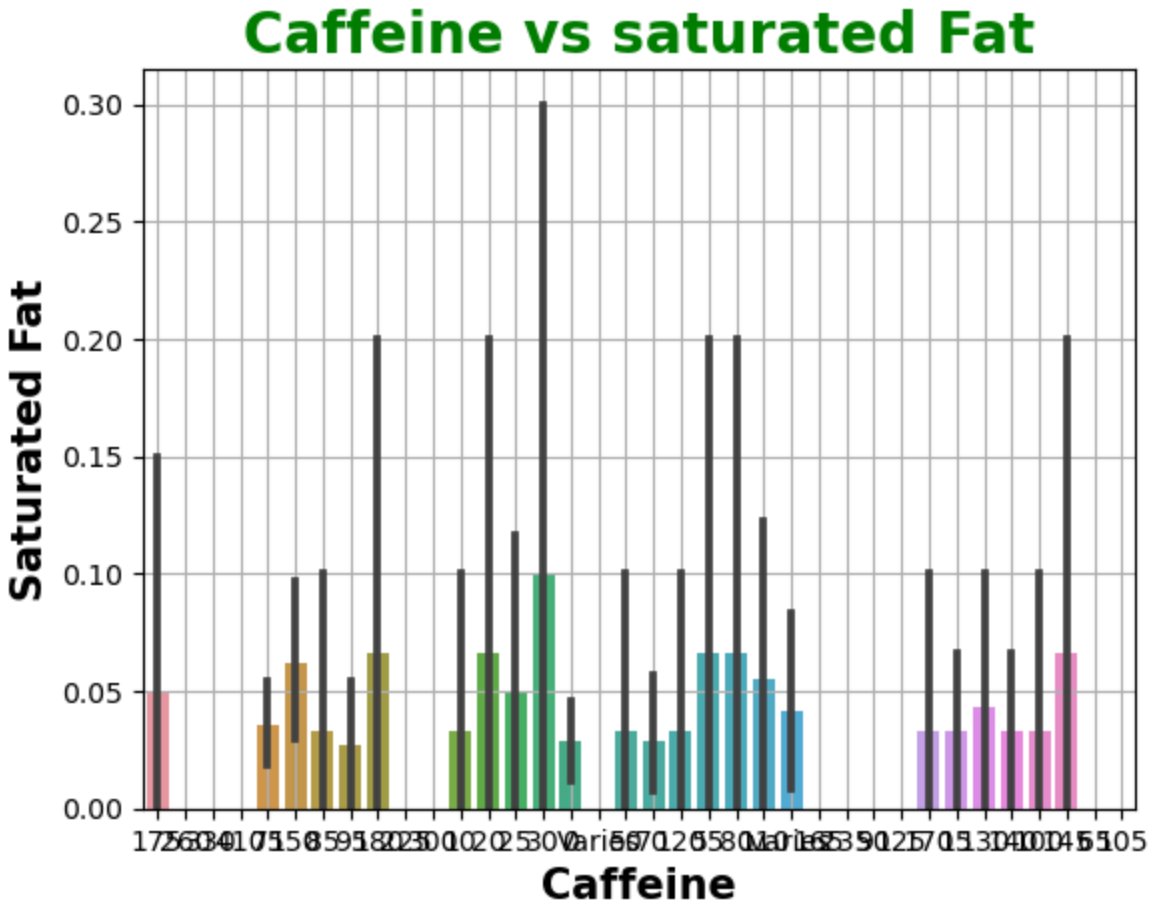


Joint Plot

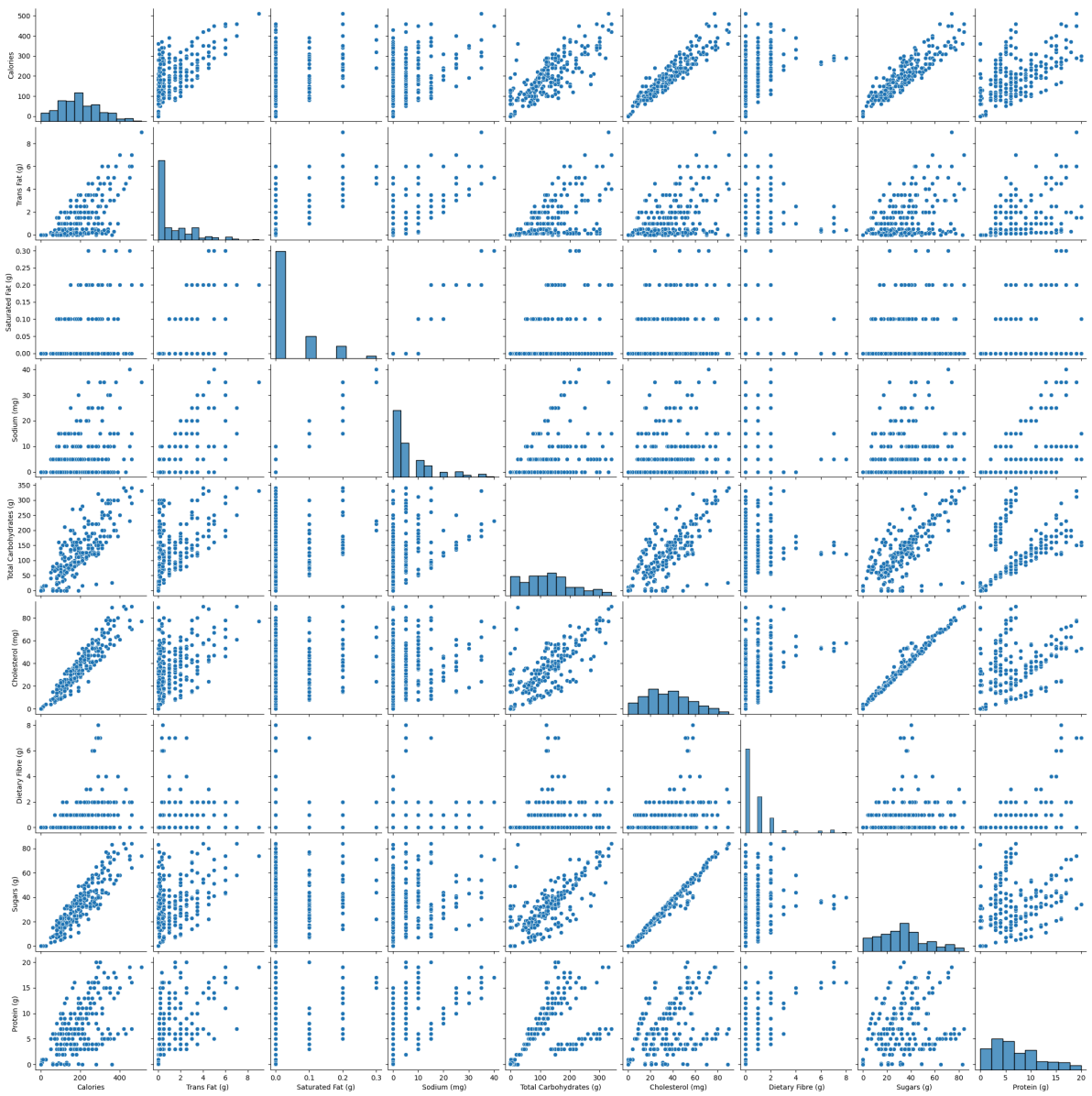
In [33]:
```
sns.jointplot(data=df,y='Calories',x='Saturated Fat (g)',color='pink')

plt.xticks(color='cyan')
plt.yticks(color='cyan')

plt.xlabel('Fat',size=15,fontweight='bold')
plt.ylabel('Range',size=15,fontweight='bold')

plt.show()
```



In [24]:
```
sns.barplot(data=df,x='Caffeine (mg)',y='Saturated Fat (g)')
plt.title('Caffeine vs saturated Fat',size=20,c='green',fontweight='bold')

plt.xlabel('Caffeine',size=15,fontweight='bold',)
plt.ylabel('Saturated Fat',size=15,fontweight='bold')

plt.grid()

plt.show()
```



In [17]:
```
sns.pairplot(data=df)

plt.show()
```



In [20]:
```
sns.pairplot(data=df,hue='Beverage_category')

plt.show()
```

In [21]:
```
df.corr()
```

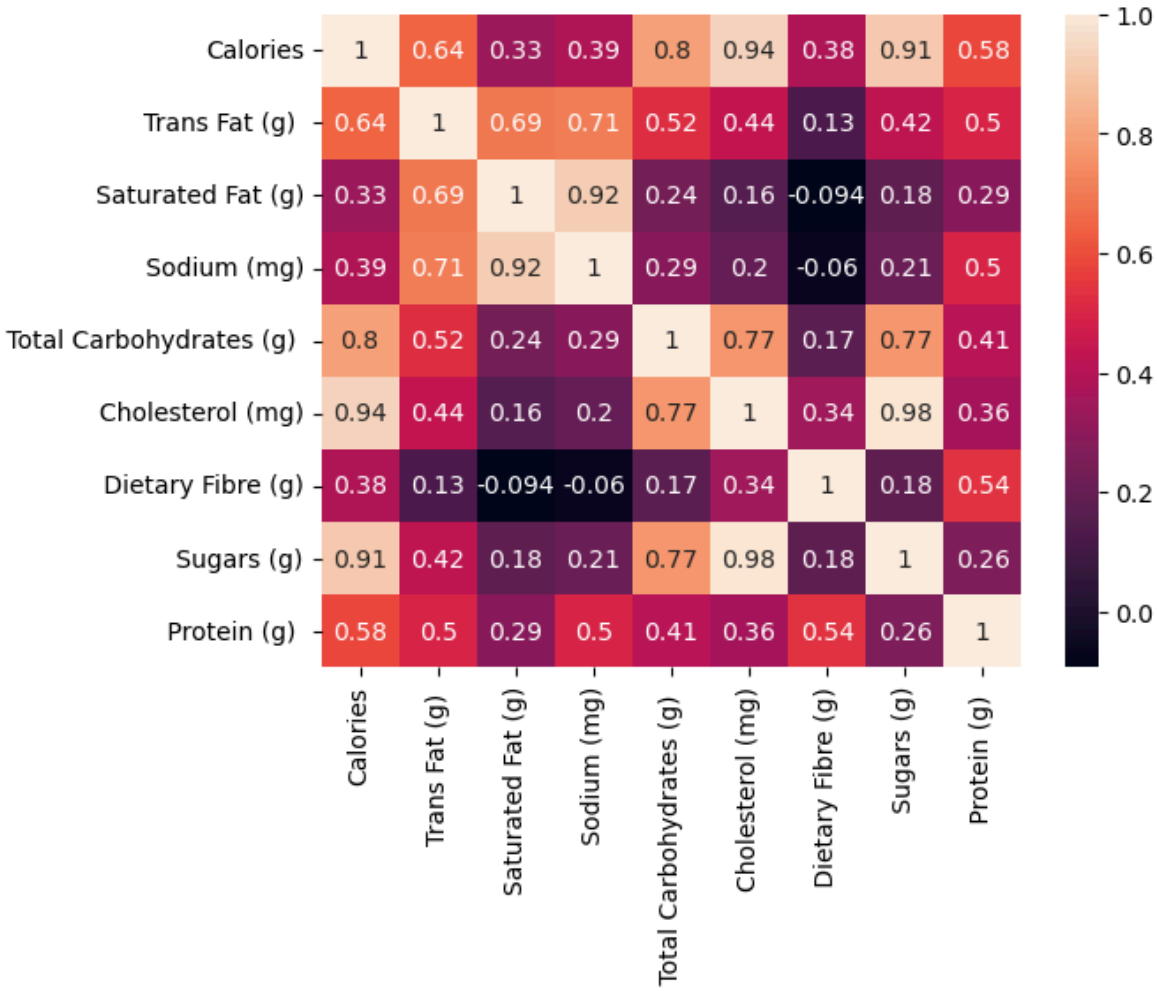
Out[21]:

	Calories	Trans Fat (g)	Saturated Fat (g)	Sodium (mg)	Total Carbohydrates (g)	Cholesterol (mg)	Dietary Fibre (g)
Calories	1.000000	0.642818	0.331047	0.387892	0.795037	0.940034	0.384292
Trans Fat (g)	0.642818	1.000000	0.694871	0.707794	0.524176	0.439811	0.131267
Saturated Fat (g)	0.331047	0.694871	1.000000	0.920077	0.238142	0.161791	-0.093783
Sodium (mg)	0.387892	0.707794	0.920077	1.000000	0.290295	0.199477	-0.060154
Total Carbohydrates (g)	0.795037	0.524176	0.238142	0.290295	1.000000	0.766654	0.173378
Cholesterol (mg)	0.940034	0.439811	0.161791	0.199477	0.766654	1.000000	0.342040
Dietary Fibre (g)	0.384292	0.131267	-0.093783	-0.060154	0.173378	0.342040	1.000000
Sugars (g)	0.909675	0.419887	0.179255	0.205969	0.771407	0.984196	0.184171
Protein (g)	0.578453	0.496317	0.287532	0.496233	0.410629	0.360449	0.540274

Heat Map

In [22]:
```
sns.heatmap(df.corr(),annot=True)
```

Out[22]: <AxesSubplot:>



Conclusion

Ultimately, the specific insights and conclusions drawn from visualizing the Starbucks dataset will depend on the depth of the analysis, the quality of the data, and the questions being asked. Visualization is a powerful tool for uncovering patterns and trends within large datasets, enabling businesses to make informed decisions and improve overall performance. By leveraging data visualization techniques on the Starbucks dataset across various dimensions, businesses can gain actionable insights that drive growth, enhance customer experiences, and streamline operations within the company.