

In [1]:

```
import pandas as pd
```

In [10]:

```
import os
os.getcwd()
```

Out[10]:

'C:\\Users\\upend'

In [14]:

```
sql = pd.read_csv('C:\\Users\\upend\\dataset_1_202305221627.csv')
```

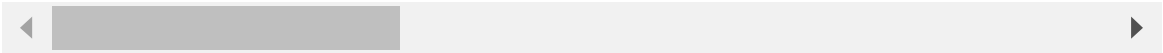
In [15]:

sql

Out[15]:

|       | destination     | passanger | weather | temperature | time | coupon                | expiration | gender |
|-------|-----------------|-----------|---------|-------------|------|-----------------------|------------|--------|
| 0     | No Urgent Place | Alone     | Sunny   | 55          | 2PM  | Restaurant(<20)       | 1d         | Fem    |
| 1     | No Urgent Place | Friend(s) | Sunny   | 80          | 10AM | Coffee House          | 2h         | Fem    |
| 2     | No Urgent Place | Friend(s) | Sunny   | 80          | 10AM | Carry out & Take away | 2h         | Fem    |
| 3     | No Urgent Place | Friend(s) | Sunny   | 80          | 2PM  | Coffee House          | 2h         | Fem    |
| 4     | No Urgent Place | Friend(s) | Sunny   | 80          | 2PM  | Coffee House          | 1d         | Fem    |
| ...   | ...             | ...       | ...     | ...         | ...  | ...                   | ...        | ...    |
| 12679 | Home            | Partner   | Rainy   | 55          | 6PM  | Carry out & Take away | 1d         | M      |
| 12680 | Work            | Alone     | Rainy   | 55          | 7AM  | Carry out & Take away | 1d         | M      |
| 12681 | Work            | Alone     | Snowy   | 30          | 7AM  | Coffee House          | 1d         | M      |
| 12682 | Work            | Alone     | Snowy   | 30          | 7AM  | Bar                   | 1d         | M      |
| 12683 | Work            | Alone     | Sunny   | 80          | 7AM  | Restaurant(20-50)     | 2h         | M      |

12684 rows × 27 columns



In [23]:

```
sql.head(3)
```

Out[23]:

|   | destination     | passanger | weather | temperature | time | coupon                | expiration | gender |
|---|-----------------|-----------|---------|-------------|------|-----------------------|------------|--------|
| 0 | No Urgent Place | Alone     | Sunny   | 55          | 2PM  | Restaurant(<20)       | 1d         | Female |
| 1 | No Urgent Place | Friend(s) | Sunny   | 80          | 10AM | Coffee House          | 2h         | Female |
| 2 | No Urgent Place | Friend(s) | Sunny   | 80          | 10AM | Carry out & Take away | 2h         | Female |

3 rows × 27 columns

In [24]:

```
sql.tail(3)
```

Out[24]:

|       | destination | passanger | weather | temperature | time | coupon            | expiration | gender |
|-------|-------------|-----------|---------|-------------|------|-------------------|------------|--------|
| 12681 | Work        | Alone     | Snowy   | 30          | 7AM  | Coffee House      | 1d         | Male   |
| 12682 | Work        | Alone     | Snowy   | 30          | 7AM  | Bar               | 1d         | Male   |
| 12683 | Work        | Alone     | Sunny   | 80          | 7AM  | Restaurant(20-50) | 2h         | Male   |

3 rows × 27 columns

In [26]:

```
sql.columns
```

Out[26]:

```
Index(['destination', 'passanger', 'weather', 'temperature', 'time', 'cou
pon',
      'expiration', 'gender', 'age', 'maritalStatus', 'has_children',
      'education', 'occupation', 'income', 'car', 'Bar', 'CoffeeHouse',
      'CarryAway', 'RestaurantLessThan20', 'Restaurant20To50',
      'toCoupon_GEQ5min', 'toCoupon_GEQ15min', 'toCoupon_GEQ25min',
      'direction_same', 'direction_opp', 'Y', 'row_count'],
      dtype='object')
```

In [27]:

»

```
sql.shape
```

Out[27]:

(12684, 27)

In [29]:

»

```
sql.describe()
```

Out[29]:

|       | temperature  | has_children | toCoupon_GEQ5min | toCoupon_GEQ15min | toCoupon_GE  |
|-------|--------------|--------------|------------------|-------------------|--------------|
| count | 12684.000000 | 12684.000000 | 12684.0          | 12684.000000      | 12684.000000 |
| mean  | 63.301798    | 0.414144     | 1.0              | 0.561495          | 0.414144     |
| std   | 19.154486    | 0.492593     | 0.0              | 0.496224          | 0.492593     |
| min   | 30.000000    | 0.000000     | 1.0              | 0.000000          | 0.000000     |
| 25%   | 55.000000    | 0.000000     | 1.0              | 0.000000          | 0.000000     |
| 50%   | 80.000000    | 0.000000     | 1.0              | 1.000000          | 0.000000     |
| 75%   | 80.000000    | 1.000000     | 1.0              | 1.000000          | 0.000000     |
| max   | 80.000000    | 1.000000     | 1.0              | 1.000000          | 1.000000     |

In [31]:

»

```
sql['passanger'].unique()
```

Out[31]:

array(['Alone', 'Friend(s)', 'Kid(s)', 'Partner'], dtype=object)

In [32]:

»

```
sql['temperature'].min()
```

Out[32]:

30

In [33]:

»

```
sql['temperature'].max()
```

Out[33]:

80

In [34]:

▶

```
sql['temperature'].mode()
```

Out[34]:

0 80  
Name: temperature, dtype: int64

In [35]:

▶

```
sql.index
```

Out[35]:

RangeIndex(start=0, stop=12684, step=1)

In [36]:

▶

```
sql[['weather', 'temperature']]
```

Out[36]:

|       | weather | temperature |
|-------|---------|-------------|
| 0     | Sunny   | 55          |
| 1     | Sunny   | 80          |
| 2     | Sunny   | 80          |
| 3     | Sunny   | 80          |
| 4     | Sunny   | 80          |
| ...   | ...     | ...         |
| 12679 | Rainy   | 55          |
| 12680 | Rainy   | 55          |
| 12681 | Snowy   | 30          |
| 12682 | Snowy   | 30          |
| 12683 | Sunny   | 80          |

12684 rows × 2 columns

In [37]:



```
sql.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 12684 entries, 0 to 12683
Data columns (total 27 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   destination                            12684 non-null  object
1   passanger                             12684 non-null  object
2   weather                               12684 non-null  object
3   temperature                           12684 non-null  int64
4   time                                   12684 non-null  object
5   coupon                                12684 non-null  object
6   expiration                             12684 non-null  object
7   gender                                12684 non-null  object
8   age                                    12684 non-null  object
9   maritalStatus                         12684 non-null  object
10  has_children                           12684 non-null  int64
11  education                              12684 non-null  object
12  occupation                             12684 non-null  object
13  income                                 12684 non-null  object
14  car                                    108 non-null    object
15  Bar                                    12577 non-null  object
16  CoffeeHouse                           12467 non-null  object
17  CarryAway                             12533 non-null  object
18  RestaurantLessThan20                  12554 non-null  object
19  Restaurant20To50                      12495 non-null  object
20  toCoupon_GEQ5min                      12684 non-null  int64
21  toCoupon_GEQ15min                    12684 non-null  int64
22  toCoupon_GEQ25min                    12684 non-null  int64
23  direction_same                        12684 non-null  int64
24  direction_opp                         12684 non-null  int64
25  Y                                      12684 non-null  int64
26  row_count                             12684 non-null  int64
dtypes: int64(9), object(18)
memory usage: 2.6+ MB
```

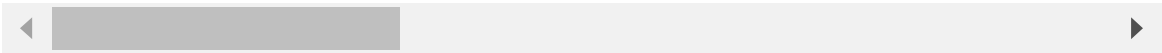
In [38]:

```
sql[sql.weather=="Rainy"]
```

Out[38]:

|       | destination     | passanger | weather | temperature | time | coupon                | expiration | genre |
|-------|-----------------|-----------|---------|-------------|------|-----------------------|------------|-------|
| 6582  | No Urgent Place | Kid(s)    | Rainy   | 55          | 10AM | Coffee House          | 1d         | M     |
| 6583  | No Urgent Place | Kid(s)    | Rainy   | 55          | 6PM  | Carry out & Take away | 1d         | M     |
| 6588  | No Urgent Place | Friend(s) | Rainy   | 55          | 6PM  | Restaurant(<20)       | 2h         | M     |
| 6602  | Work            | Alone     | Rainy   | 55          | 7AM  | Bar                   | 1d         | M     |
| 6604  | No Urgent Place | Kid(s)    | Rainy   | 55          | 10AM | Coffee House          | 1d         | M     |
| ...   | ...             | ...       | ...     | ...         | ...  | ...                   | ...        |       |
| 12667 | No Urgent Place | Alone     | Rainy   | 55          | 10AM | Bar                   | 1d         | M     |
| 12670 | No Urgent Place | Partner   | Rainy   | 55          | 6PM  | Bar                   | 2h         | M     |
| 12674 | Home            | Alone     | Rainy   | 55          | 10PM | Coffee House          | 2h         | M     |
| 12679 | Home            | Partner   | Rainy   | 55          | 6PM  | Carry out & Take away | 1d         | M     |
| 12680 | Work            | Alone     | Rainy   | 55          | 7AM  | Carry out & Take away | 1d         | M     |

1210 rows × 27 columns



In [39]:

```
sql[sql.passanger=="Partner"]
```

Out[39]:

|       | destination     | passanger | weather | temperature | time | coupon                | expiration | gender |
|-------|-----------------|-----------|---------|-------------|------|-----------------------|------------|--------|
| 222   | No Urgent Place | Partner   | Sunny   | 80          | 10AM | Coffee House          | 2h         | Fem    |
| 223   | No Urgent Place | Partner   | Sunny   | 80          | 10AM | Restaurant(20-50)     | 1d         | Fem    |
| 224   | No Urgent Place | Partner   | Sunny   | 80          | 10AM | Bar                   | 2h         | Fem    |
| 225   | No Urgent Place | Partner   | Sunny   | 80          | 10AM | Coffee House          | 2h         | Fem    |
| 226   | No Urgent Place | Partner   | Sunny   | 80          | 6PM  | Restaurant(<20)       | 2h         | Fem    |
| ...   | ...             | ...       | ...     | ...         | ...  | ...                   | ...        |        |
| 12670 | No Urgent Place | Partner   | Rainy   | 55          | 6PM  | Bar                   | 2h         | M      |
| 12671 | No Urgent Place | Partner   | Snowy   | 30          | 10AM | Restaurant(<20)       | 1d         | M      |
| 12677 | Home            | Partner   | Sunny   | 30          | 6PM  | Restaurant(<20)       | 1d         | M      |
| 12678 | Home            | Partner   | Sunny   | 30          | 10PM | Restaurant(<20)       | 2h         | M      |
| 12679 | Home            | Partner   | Rainy   | 55          | 6PM  | Carry out & Take away | 1d         | M      |

1075 rows × 27 columns



In [ ]: