Task: Feature Engineering

- Extract additional features from the existing columns, such as the length of the restaurant name or address.
- Create new features like "Has Table Booking" or "Has Online Delivery" by encoding categorical variables.

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

In [2]:
```
data_df=pd.read_csv('Dataset.csv')
data_df
```

Out[2]:

	Restaurant ID	Restaurant Name	Country Code	City	Address	Locality
0	6317637	Le Petit Souffle	162	Makati City	Third Floor, Century City Mall, Kalayaan Avenu...	Century City Mall, Poblacion, Makati City
1	6304287	Izakaya Kikufuji	162	Makati City	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	Little Tokyo, Legaspi Village, Makati City
2	6300002	Heat - Edsa Shangri-La	162	Mandaluyong City	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	Edsa Shangri-La, Ortigas, Mandaluyong City
3	6318506	Ooma	162	Mandaluyong City	Third Floor, Mega Fashion Hall, SM Megamall, O...	SM Megamall, Ortigas, Mandaluyong City
4	6314302	Sambo Kojin	162	Mandaluyong City	Third Floor, Mega Atrium, SM Megamall, Ortigas...	SM Megamall, Ortigas, Mandaluyong City
...	...	...	...	...	...	...
9546	5915730	Naml\ Gurme	208	��stanbul	Kemanke�� Karamustafa Pa��a Mahallesi, Rlhtlm ...	Karak�_y
9547	5908749	Ceviz A��acl	208	��stanbul	Ko��uyolu Mahallesi, Muhittin ��st�_nda�� Cadd...	Ko��uyolu
9548	5915807	Huqqa	208	��stanbul	Kuru�_e��me Mahallesi, Muallim Naci Caddesi, N...	Kuru�_e��me
9549	5916112	A���k Kahve	208	��stanbul	Kuru�_e��me Mahallesi, Muallim Naci Caddesi, N...	Kuru�_e��me
9550	5927402	Walter's Coffee Roastery	208	��stanbul	Cafea��a Mahallesi, Bademaltl Sokak, No 21/B, ...	Moda

9551 rows × 21 columns

Extract additional features from the existing columns, such as the length of the restaurant name or address.

In [3]:
```
data_df['Restaurant Name Length'] = data_df['Restaurant Name'].str.len()
data_df['Address Length'] = data_df['Address'].str.len()
data_df[['Restaurant Name', 'Restaurant Name Length', 'Address', 'Address Length
```

Out[3]:

	Restaurant Name	Restaurant Name Length	Address	Address Length
0	Le Petit Souffle	16	Third Floor, Century City Mall, Kalayaan Avenu...	71
1	Izakaya Kikufuji	16	Little Tokyo, 2277 Chino Roces Avenue, Legaspi...	67
2	Heat - Edsa Shangri-La	22	Edsa Shangri-La, 1 Garden Way, Ortigas, Mandal...	56
3	Ooma	4	Third Floor, Mega Fashion Hall, SM Megamall, O...	70
4	Sambo Kojin	11	Third Floor, Mega Atrium, SM Megamall, Ortigas...	64

Create new features like "Has Table Booking" or "Has Online Delivery" by encoding categorical variables.

In [5]:
```
data_df['Has Table Booking (Encoded)'] = data_df['Has Table booking'].map({'Yes'
data_df['Has Online Delivery (Encoded)'] = data_df['Has Online delivery'].map({'
data_df[['Has Table booking', 'Has Table Booking (Encoded)', 'Has Online deliver
```

Out[5]:

	Has Table booking	Has Table Booking (Encoded)	Has Online delivery	Has Online Delivery (Encoded)
0	Yes	1	No	0
1	Yes	1	No	0
2	Yes	1	No	0
3	No	0	No	0
4	Yes	1	No	0

In [ ]:
```

```