**📊 Level 2 – Task 3: Feature Engineering**

**📌 Objective**

* Extract additional features from existing columns (e.g., **length of restaurant name and address**).
* Create new features by encoding categorical variables (e.g., **"Has Table Booking" and "Has Online Delivery"** as numerical values).

**1️⃣ Step 1: Extract Additional Features from Existing Columns**

🔹 **New Features Created:**  
✔ **Restaurant Name Length** → Number of characters in the restaurant name.  
✔ **Address Length** → Number of characters in the address.

🔹 **Key Insights:**  
✔ These features help analyze the **complexity of restaurant names and addresses**.  
✔ Longer restaurant names may indicate **premium or themed dining experiences**.

**2️⃣ Step 2: Encode Categorical Features**

🔹 **Converted categorical variables into numerical values:**  
✔ **"Has Table Booking"** → "Yes" → 1, "No" → 0  
✔ **"Has Online Delivery"** → "Yes" → 1, "No" → 0

🔹 **Key Insights:**  
✔ This transformation makes the dataset **ready for statistical analysis and machine learning models**.  
✔ Encoded features allow us to explore **how table booking and online delivery impact ratings and sales**.