

Pandas Merging dataframes

Merging dataframes in pandas is a powerful way to combine data from multiple sources into a single dataframe.

Pandas provide several methods to achieve this, but the most common method one is `merge()` function.

Syntax:

```
pd.merge(left,right,
         how='left|right|inner|outer',left_on='',right_on='',left_index='',right_index='')
```

Note:

- **left**: The first dataframe.
- **right**: The second dataframe.
- **how**: The type of join to perform. Options include 'left', 'right', 'outer', and 'inner'.
- **on**: Column or index level name(s) to join on. Must be found in both dataframes.
- **left_on**: Column or index level name(s) in the left dataframe to join on.
- **right_on**: Column or index level name(s) in the right dataframe to join on.
- **left_index**: If True, use the index from the left dataframe as the join key(s).
- **right_index**: If True, use the index from the right dataframe as the join key(s).

Example:

```
import numpy as np
import pandas as pd

food = pd.read_csv("csv/restaurant_foods.csv")
customers = pd.read_csv("csv/restaurant_customers.csv")
week_1 = pd.read_csv("csv/restaurant_week_1_sales.csv")
week_2 = pd.read_csv("csv/restaurant_week_2_sales.csv")

print(week_1.head())
print(food.head())

df = pd.merge(food, week_1, how="left", on="Food ID")

print(df)
```