Pandas Attributes vs Methods Cheat Sheet

Introduction

In Python's pandas library, accessing information from a DataFrame can involve either attributes or methods.

Attributes do not require parentheses and are used to access metadata or properties.

Methods, on the other hand, require parentheses and are functions that perform actions on the DataFrame.

This cheat sheet helps you quickly differentiate between common attributes and methods in pandas.

Attributes (No parentheses needed)

df.shape   - Tuple of rows and columns (e.g., (100, 5))

df.columns   - Index of column names (e.g., Index(['A', 'B', 'C']))

df.index   - Index of the DataFrame

df.dtypes   - Data types of each column

df.values   - Numpy array of values

df.ndim   - Number of dimensions (e.g., 2)

df.size   - Total number of elements (rows × cols)

Methods (Use parentheses to call)

df.head(n)   - First n rows (default n=5)

df.tail(n)   - Last n rows

df.info()   - Summary of DataFrame

df.describe()   - Summary statistics

df.sample(n)   - Random sample of n rows

df.drop()   - Drop rows/columns (e.g., df.drop('col1', axis=1))

df.sort_values() - Sort by values (e.g., df.sort_values('A'))

df.fillna()   - Fill missing values

df.isnull()   - Check for missing values

df.groupby()   - Group rows by column(s)

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Pro Tip

Use type() to check whether an item is a method or attribute:

type(df.shape)   # <class 'tuple'> --> attribute

type(df.sample)   # <class 'method'> --> method

Pro Tip