

Columns and DataType Not Explicitly Set

Context

In Pandas, all columns are selected by default when a DataFrame is imported from a file or other sources. The data type for each column is defined based on the default dtype conversion.

Problem

- If columns are not explicitly selected, it becomes unclear what to expect in the data schema for downstream processes.
- If data types are not set explicitly, the process may silently move to the next step with unexpected inputs, potentially leading to errors later.

Therefore, every data loading operation **should contain the name of the column AND the datatype of each column.**

Existing Stage

Effect

Data importing and Cleaning.

Readability

Solution

It is recommended to specify **columns name AND datatypes when loading data.**

Example

Python

Pandas Column Selection

```
import pandas as pd
```

```
df = pd.read_csv('data.csv')
```

```
+ df = df[['col1', 'col2', 'col3']]
```

Pandas Set DataType

```
import pandas as pd
```

```
- df = pd.read_csv('data.csv')
```

```
+ df = pd.read_csv('data.csv', dtype={'col1': 'str', 'col2':  
'int', 'col3': 'float'})
```