

ILOC AND LOC IN PANDA



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- ✓ Loc allows you to select data based on the label or name of the row or column, while iloc uses the number or index of the row or column.
- ✓ Understanding the difference between these two methods is crucial for effectively working with data in Python.
- ✓ Whether you're a seasoned data analyst or just starting out, understanding how to use loc and iloc will give you the skills you need to effectively analyze data in Python.



LOC

THE LOC() FUNCTION IS LABEL BASED DATA SELECTING METHOD WHICH MEANS THAT WE HAVE TO PASS THE NAME OF THE ROW OR COLUMN WHICH WE WANT TO SELECT.

```
new_data=dataset_name.loc[dataset_name['Column Name']=='Filter_condition']
```



ILOC

THE ILOC() FUNCTION IS AN INDEXED-BASED SELECTING METHOD WHICH MEANS THAT WE HAVE TO PASS AN INTEGER INDEX IN THE METHOD TO SELECT A SPECIFIC ROW/COLUMN.

```
# selecting 0th, 2th, 4th, and 7th index rows  
display(dataset_name.iloc[[0, 2, 4, 7]])
```



Python Pandas Selections and Indexing

.iloc selections - position based selection

`data.iloc[<row selection>, <column selection>]`

Integer list of rows: [0,1,2]

Slice of rows: [4:7]

Single values: 1

Integer list of columns: [0,1,2]

Slice of columns: [4:7]

Single column selections: 1

loc selections - position based selection

`data.loc[<row selection>, <column selection>]`

Index/Label value: 'john'

List of labels: ['john', 'sarah']

Logical/Boolean index: data['age'] == 10

Named column: 'first_name'

List of column names: ['first_name', 'age']

Slice of columns: 'first_name':'address'

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| | loc[] - By Label | iloc[] - By Index |
|--------------------------|--------------------------------|-----------------------------------|
| Select Single Row | df.loc['r2'] | df.iloc[1] |
| Select Single Column | df.loc[:, "Courses"] | df.iloc[:, 0] |
| Select Multiple Rows | df.loc[['r2','r3']] | df.iloc[[1,2]] |
| Select Multiple Columns | df.loc[:, ["Courses","Fee"]] | df.iloc[:, [0,1]] |
| Select Rows Range | df.loc['r1':'r4'] | df.iloc[0:4] |
| Select Columns Range | df.loc[:, 'Fee': 'Discount'] | df.iloc[:, 1:4] |
| Select Alternate Rows | df.loc['r1':'r4':1] | df.iloc[0:4:1] |
| Select Alternate Columns | df.loc[:, 'Fee': 'Discount':1] | df.iloc[:, 1:4:1] |
| Using Condition | df.loc[df['Fee'] >= 24000] | df.iloc[list(df['Fee'] >= 24000)] |
| Using Lambda Function | df.loc[lambda x: x[3]] | df.iloc[lambda x: x[3]] |

Difference Between pandas DataFrame loc vs iloc

To Get Complete Document Visit

[https://academy.decodingdatascience.com/jobready 6](https://academy.decodingdatascience.com/jobready6)



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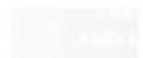
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