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Input/output

General functions

Series

DataFrame

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# pandas.DataFrame.dropna

**DataFrame.dropna**(*self*, *axis=0*, *how='any'*, *thresh=None*, *subset=None*, *inplace=False*) [\[source\]](#)

Remove missing values.

See the [User Guide](#) for more on which values are considered missing, and how to work with missing data.

**Parameters:**

**axis :** *{0 or 'index', 1 or 'columns'}, default 0*

Determine if rows or columns which contain missing values are removed.

- 0, or 'index' : Drop rows which contain missing values.
- 1, or 'columns' : Drop columns which contain missing value.

*Changed in version 1.0.0:* Pass tuple or list to drop on multiple axes. Only a single axis is allowed.

**how :** *{'any', 'all'}, default 'any'*

Determine if row or column is removed from DataFrame, when we have at least one NA or all NA.

- 'any' : If any NA values are present, drop that row or column.
- 'all' : If all values are NA, drop that row or column.

**thresh :** *int, optional*

Require that many non-NA values.

**subset :** *array-like, optional*

Labels along other axis to consider, e.g. if you are dropping rows these would be a list of columns to include.

**inplace :** *bool, default False*

If True, do operation inplace and return None.

**Returns:** **DataFrame**  
DataFrame with NA entries dropped from it.

**See also**

- DataFrame.isna**  
Indicate missing values.
- DataFrame.notna**  
Indicate existing (non-missing) values.
- DataFrame.fillna**  
Replace missing values.
- Series.dropna**  
Drop missing values.
- Index.dropna**  
Drop missing indices.

Examples

```
>>> df = pd.DataFrame({"name": ['Alfred', 'Batman', 'Catwoman'],
...                    "toy": [np.nan, 'Batmobile', 'Bullwhip'],
...                    "born": [pd.NaT, pd.Timestamp("1940-04-25"),
...                              pd.NaT]})
>>> df
   name      toy      born
0  Alfred      NaN      NaT
1  Batman  Batmobile  1940-04-25
2 Catwoman  Bullwhip      NaT
```

Drop the rows where at least one element is missing.

```
>>> df.dropna()
   name      toy      born
1  Batman  Batmobile  1940-04-25
```

Drop the columns where at least one element is missing.

```
>>> df.dropna(axis='columns')
   name
0  Alfred
1  Batman
2  Catwoman
```

Drop the rows where all elements are missing.

```
>>> df.dropna(how='all')
   name      toy      born
0  Alfred      NaN      NaT
1  Batman  Batmobile  1940-04-25
2  Catwoman  Bullwhip      NaT
```

Keep only the rows with at least 2 non-NA values.

```
>>> df.dropna(thresh=2)
   name      toy      born
1  Batman  Batmobile  1940-04-25
2  Catwoman  Bullwhip      NaT
```

Define in which columns to look for missing values.

```
>>> df.dropna(subset=['name', 'born'])
   name      toy      born
1  Batman  Batmobile  1940-04-25
```

Keep the DataFrame with valid entries in the same variable.

```
>>> df.dropna(inplace=True)
>>> df
   name      toy      born
1  Batman  Batmobile  1940-04-25
```