

Processing Dataframes in Chunks: Takeaways



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Syntax

- Specifying the number of rows we want each chunk of a dataframe to contain:

```
chunk_iter = pd.read_csv("data.csv", chunksize = 10000)
```

- Printing each chunk:

```
for chunk in chunk_iter:  
    print(chunk)
```

- Combining pandas objects:

```
series_list = [pd.Series([1,2]), pd.Series([2,3])]
```

- Creating a GroupBy object:

```
s4 = s3.groupby(s3.index)
```

- Observing the groups in a GroupBy object:

```
for key, item in s4:  
    print(key.get_group(key))
```

- Timing chunking and processing:

```
%%timeit  
lifespans = []  
chunk_iter = pd.read_csv("moma.csv", chunksize=250, dtype={"ConstituentBeginDate": "float",  
"ConstituentEndDate": "float"}, usecols=['ConstituentBeginDate', 'ConstituentEndDate'])  
for chunk in chunk_iter:  
    lifespans.append(chunk['ConstituentEndDate'] - chunk['ConstituentBeginDate'])  
lifespans_dist = pd.concat(lifespans)
```

Concepts

- We can use chunking to load in and process dataframes in chunks when working with data sets that don't fit into memory.
- Breaking a task down, processing the different parts separately, and combining them later on is an important workflow in batch processing.
- We can cut down the overall running time by only loading in the columns we're examining.

Resources

- [Batch Processing](#)
- [Documentation for the Series.groupby method](#)