

Setting the Index

The screenshot shows a web browser window with the URL `campus.datacamp.com/courses/analyzing-police-activity-with-pandas/preparing-the-data-for-analysis/ex=10`. The page is titled 'Setting the Index' and is part of a course on 'Analyzing Police Activity with pandas'. The instructions state: 'The last step that you'll take in this chapter is to set the `stop_datetime` column as the DataFrame's index. By replacing the default index with a `DatetimeIndex`, you'll make it easier to analyze the dataset by date and time, which will come in handy later in the course!'

The instructions list the following steps:

- Set `stop_datetime` as the DataFrame index.
- Examine the index to verify that it is a `DatetimeIndex`.
- Examine the DataFrame columns to confirm that `stop_datetime` is no longer one of the columns.

A 'Take Hint (30 XP)' button is visible. On the right, there is a code editor with the following code:

```
1 # Set 'stop_datetime' as the index
2 ri.set_index('stop_datetime', inplace=True)
3
4 # Examine the index
5 print(ri.index)
6
7 # Examine the columns
8 print(ri.columns)
```

Below the code editor is a 'Python Shell' window showing the output of the code.

Task Description

1. Set 'stop_datetime' as the DataFrame index.
2. Examine the index to verify that it is a `DatetimeIndex`.
3. Examine the DataFrame columns to confirm that 'stop_datetime' is no longer one of the columns.

Code Solution

```
# Set 'stop_datetime' as the index
ri.set_index('stop_datetime', inplace=True)
```

```
# Examine the index
print(ri.index)
```

```
# Examine the columns
print(ri.columns)
```

Code Explanation

1. The line `ri.set_index('stop_datetime', inplace=True)` sets the 'stop_datetime' column as the index of the DataFrame. This replaces the default integer index, enabling easier analysis by date and time.
2. The line `print(ri.index)` prints the current index of the DataFrame, confirming that it is now a `DatetimeIndex`.

3. The line `print(ri.columns)` prints the list of columns in the DataFrame, verifying that `'stop_datetime'` is no longer included in the list of columns since it has been moved to the index.