

PANDAS ASSIGN

SHARP SIGHT

# WHAT YOU'LL LEARN

- How to use the Pandas `assign` method
- How to add new variables to a DataFrame

# PANDAS ASSIGN OVERVIEW

# EXAMPLE: WE HAVE A DATAFRAME AND WE WANT TO ADD A VARIABLE

model	make	year	horsepower	weight
911 Turbo	Porsche	2013	513	1.67
Z4 3.0i	BMW	2007	215	1.36
Cayman	Porsche	2007	241	1.3
Veyron	Bugatti	2012	1184	1.84
550i	BMW	2013	444	1.9

# THE ASSIGN METHOD ADDS NEW VARIABLES TO A DATAFRAME

```
supercars.assign(hp_per_ton = supercars.horsepower / supercars.weight)
```

model	make	year	horsepower	weight
911 Turbo	Porsche	2013	513	1.67
Z4 3.0i	BMW	2007	215	1.36
Cayman	Porsche	2007	241	1.3
Veyron	Bugatti	2012	1184	1.84
550i	BMW	2013	444	1.9

# THE ASSIGN METHOD ADDS NEW VARIABLES TO A DATAFRAME

```
supercars.assign(hp_per_ton = supercars.horsepower / supercars.weight)
```



Take an existing dataframe...



Pandas `assign` enables you to add a new variable to the DataFrame

These variables are often calculated based on the existing variables in the DataFrame

# THE ASSIGN METHOD ADDS NEW VARIABLES TO A DATAFRAME

```
supercars.assign(hp_per_ton = supercars.horsepower / supercars.weight)
```

model	make	year	horsepower	weight	hp_per_ton
911 Turbo	Porsche	2013	513	1.67	307.2
Z4 3.0i	BMW	2007	215	1.36	158.1
Cayman	Porsche	2007	241	1.3	185.4
Veyron	Bugatti	2012	1184	1.84	643.5
550i	BMW	2013	444	1.9	233.7

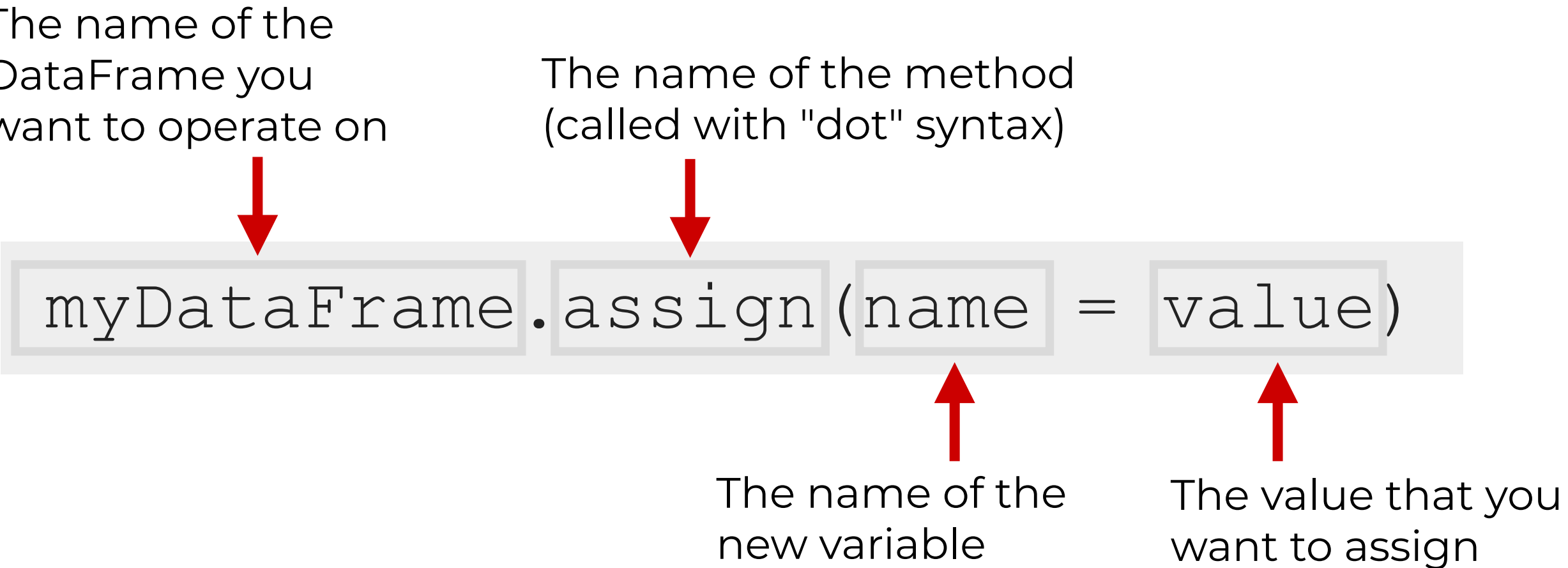
# PANDAS ASSIGN SYNTAX



# SYNTAX: PANDAS ASSIGN

The name of the  
DataFrame you  
want to operate on

The name of the method  
(called with "dot" syntax)



```
myDataFrame.assign(name = value)
```

The diagram illustrates the syntax of the Pandas `assign` method. A light gray rectangular box contains the code `myDataFrame.assign(name = value)`. Four red arrows point from descriptive text labels to specific parts of the code: one points down to `myDataFrame`, another points down to `.assign`, a third points up to `name`, and a fourth points up to `value`. Each of these four components is also enclosed in its own thin gray border within the main code box.

The name of the  
new variable

The value that you  
want to assign

# SYNTAX: PANDAS ASSIGN (CONTINUED)

```
myDataFrame.assign(name = value)
```



These values are often  
computed based on existing  
values in the DataFrame

# SYNTAX: ADD MULTIPLE VARIABLES

We can add multiple variables with one call  
...just separate them with a comma

```
myDataFrame.assign(name1 = value1, name2 = value2)
```



Computation for  
first new variable



Computation for  
second new variable

# PARAMETERS OF PANDAS ASSIGN

# THE PARAMETERS OF PANDAS ASSIGN

Input	What it does
"name/value" pair	Defines the computation for the new value and assigns it to the new variable "name"

# THE OUTPUT OF PANDAS ASSIGN

- Pandas `assign` outputs a new DataFrame
  - Contains all of the old variables
  - Also contains the new variables

RECAP

# RECAP OF WHAT WE LEARNED

- The Pandas `assign` adds new variables to a DataFrame
  - Outputs a new DataFrame with the old vars and new vars
- You can add multiple variables in one method call
- **Next Steps:** The code walkthrough video will show you concrete examples of Pandas `assign`