Seaborn distplot

SHARP SIGHT

What you'll learn

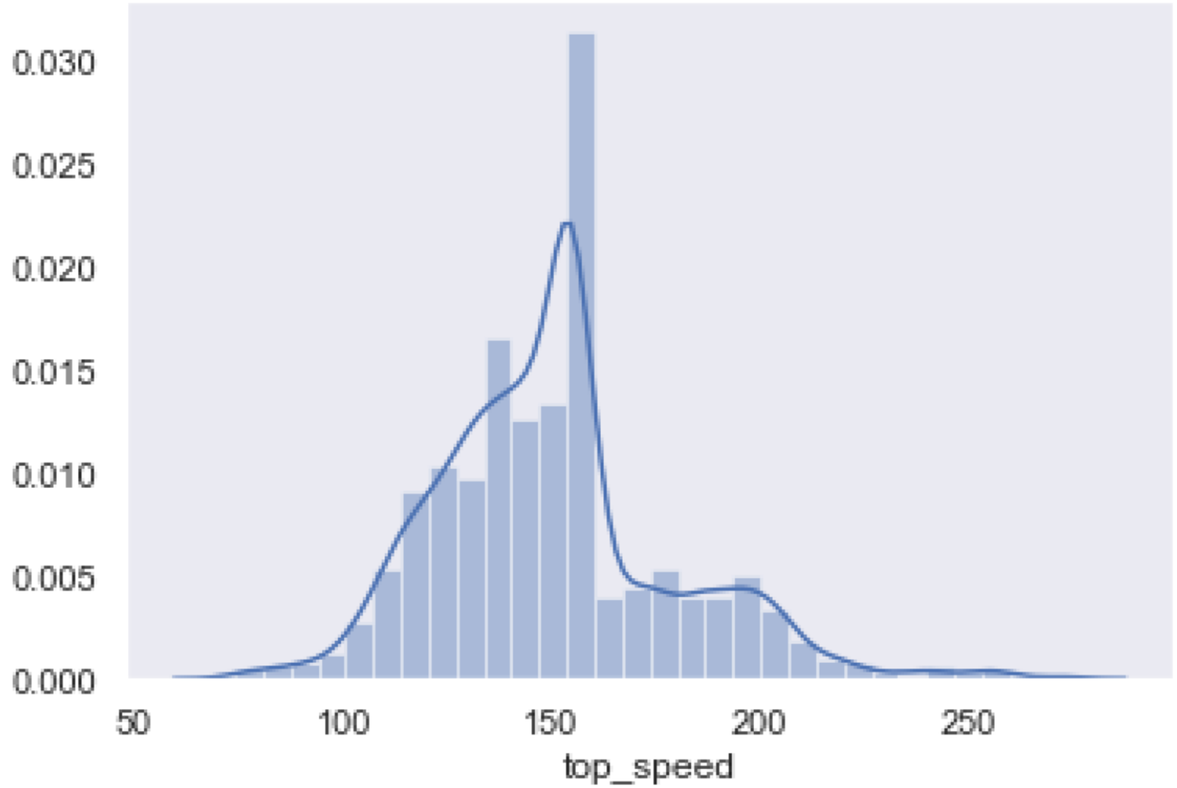
- How to create a "distplot" in Seaborn
  - a combined histogram & density plot

- How to modify your distplots
  - change color
  - change the bins in the histogram
  - create a pure histogram
  - create a pure density plot

Seaborn distplot overview

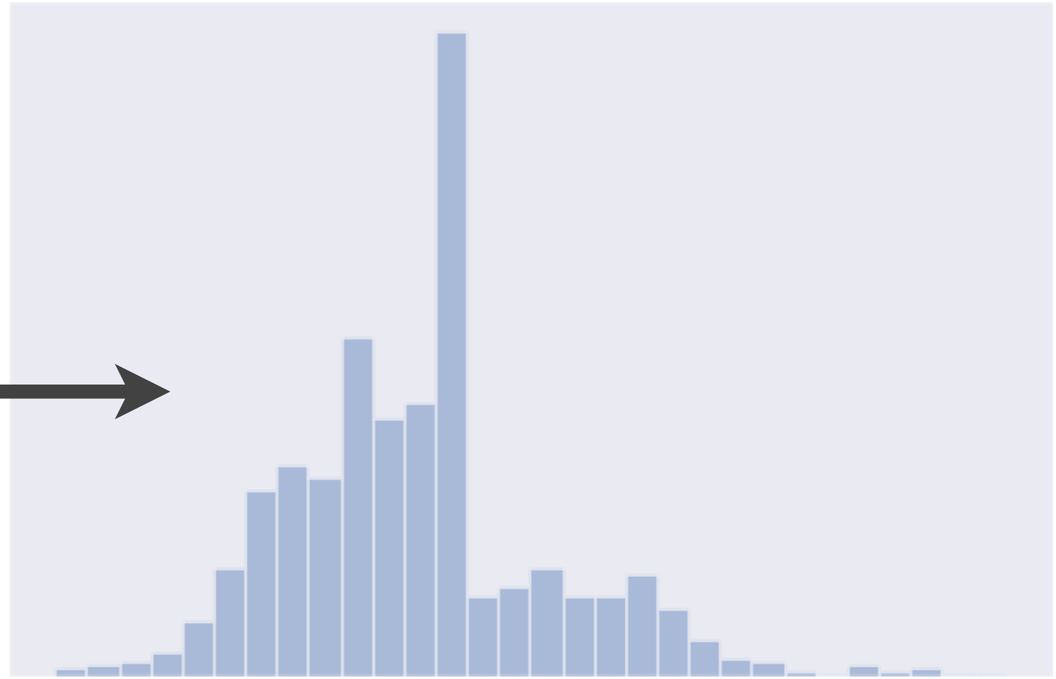
SNS.DISTPLOT CREATES A COMBINED HISTOGRAM & DENSITY PLOT

```
sns.distplot(supercars.top_speed
             ,bins=30
             )
```



Part of the distplot is a histogram

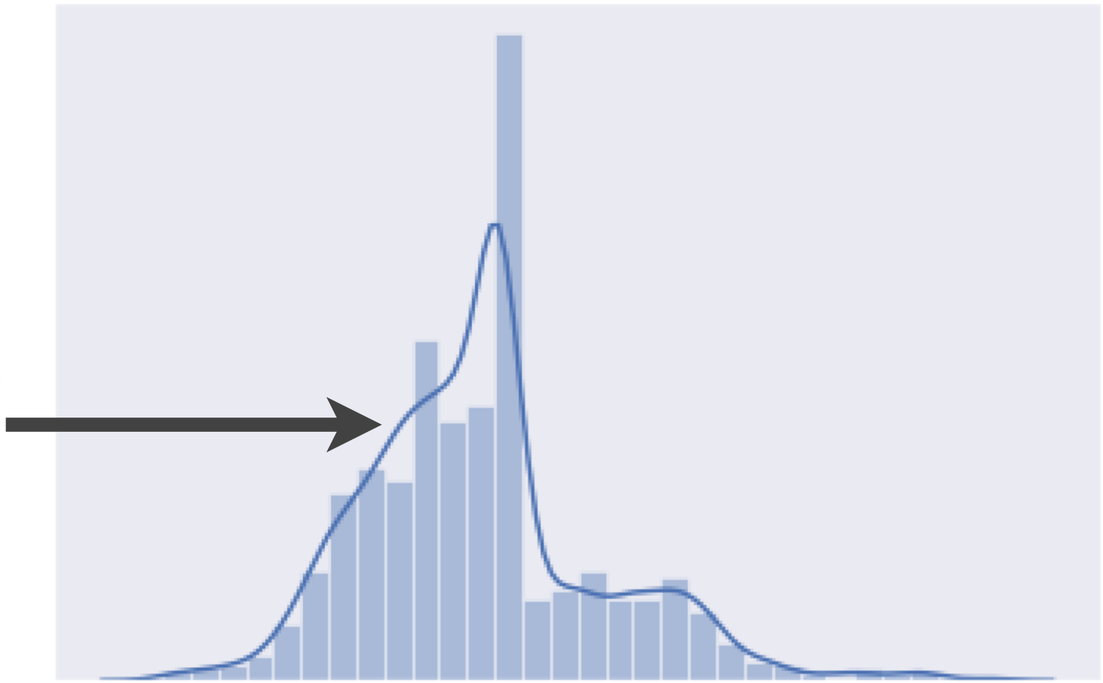
The length of each bar represents the count for that particular bin



In the histogram, a numeric variable is mapped to the x axis and the axis is divided up into "bins"

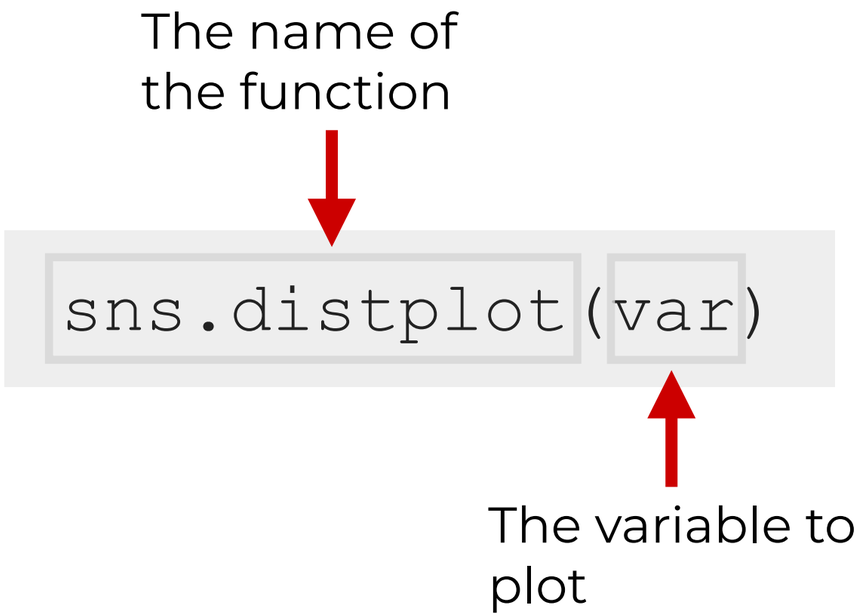
In the distplot, the histogram is overlayed with a density estimate

The height of the line represents the density for that value of the x-axis



Seaborn distplot syntax

Syntax of sns.distplot



Parameters of sns.distplot

The parameters of sns.distplot

Parameter	What it does	Format	Default
`color`	Specifies the color of the bars and the KDE plot	A color	
`kde`	Specifies whether or not you want to include the KDE line in the plot	`True` or `False`	`True`
`hist`	Specifies whether or not you want to include the histogram in the plot	`True` or `False`	`True`
`bins`	Specifies the number of bins for the histogram	A number	

Examples of sns.distplot

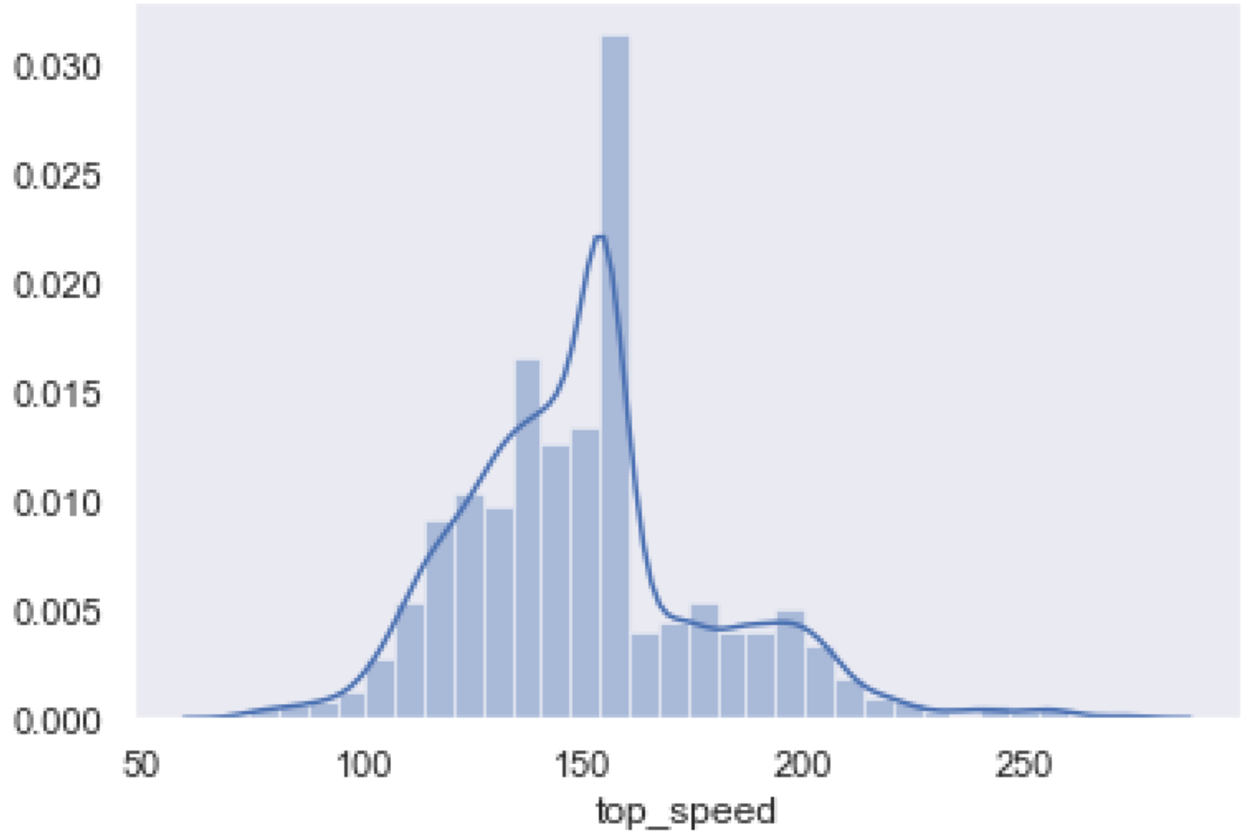
Example 1: create a simple distplot

```
sns.distplot(supercars.top_speed
             ,bins=30
             )
```

Here, we're specifying the variable that we want to plot (i.e., `supercars.top_speed`)

Example 1: create a simple distplot

```
sns.distplot(supercars.top_speed
             ,bins=30
             )
```



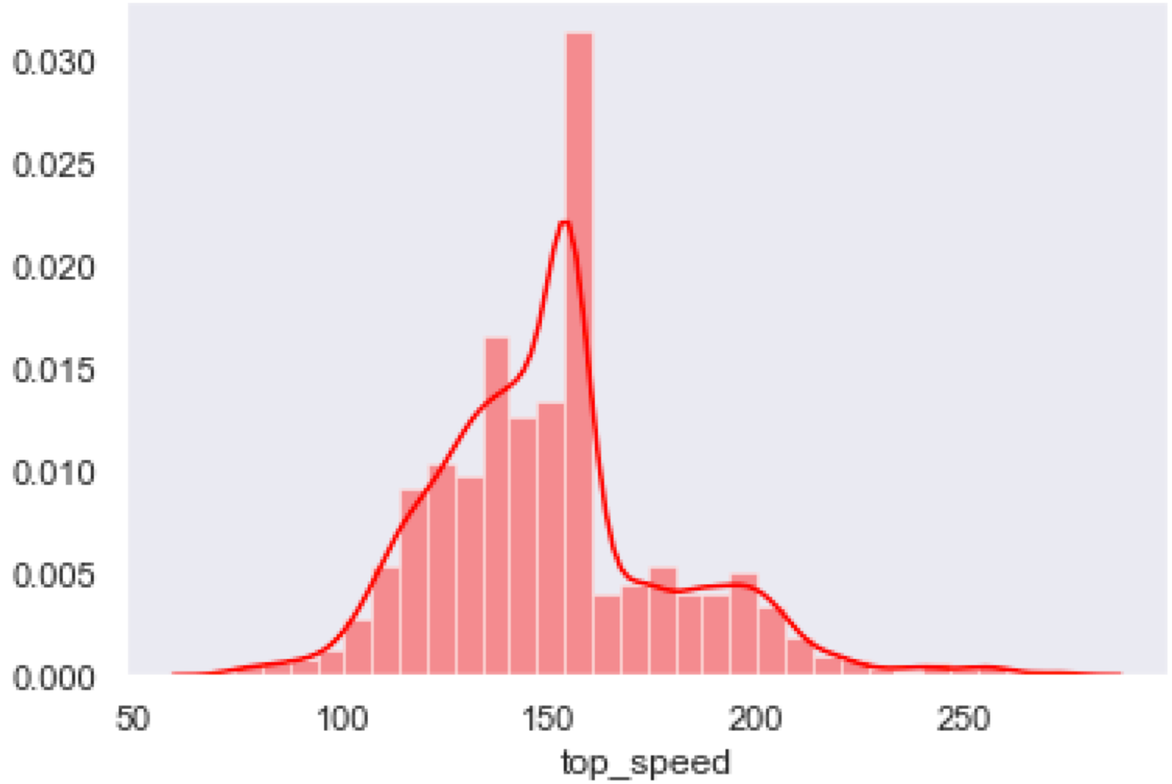
Example 2: Change the color

```
sns.distplot(supercars.top_speed
             ,bins=30
             ,color = 'red'
             )
```

Here, we're using the color parameter to change the `color` of the plot to `'red'`

Example 2: Change the color

```
sns.distplot(supercars.top_speed
             ,bins=30
             ,color = 'red'
             )
```



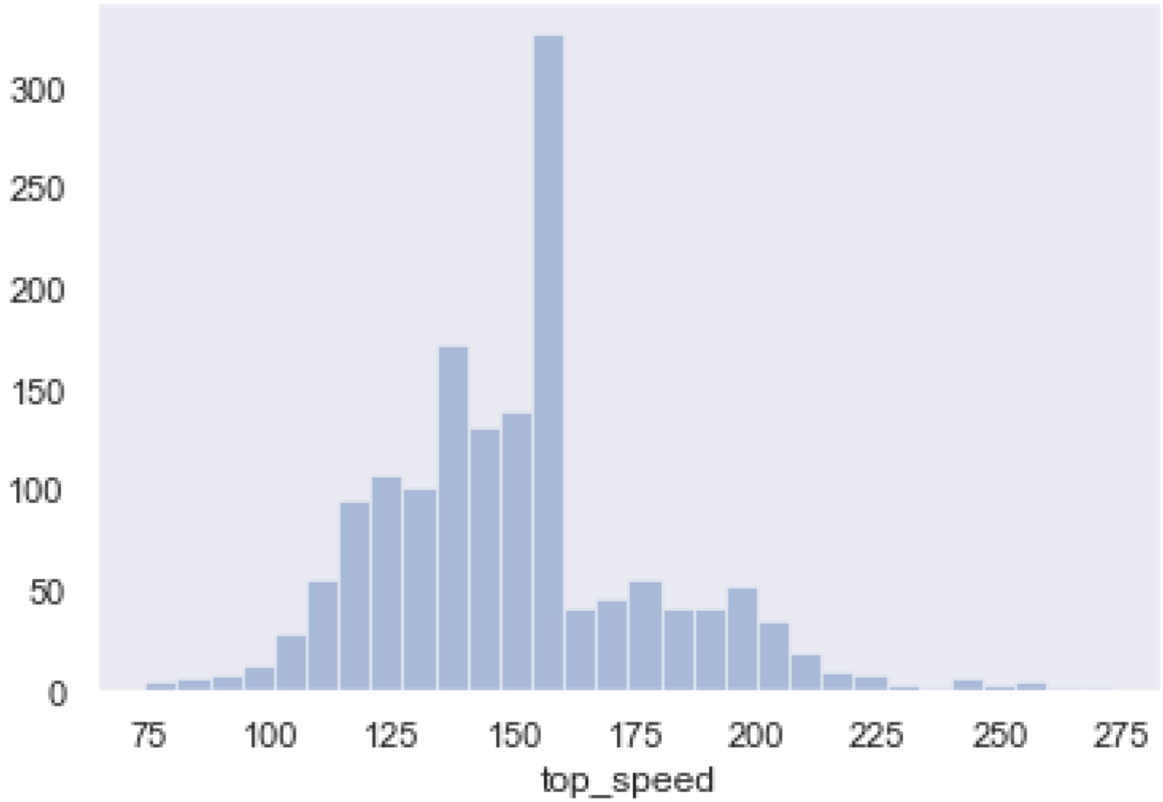
Example 3: create a pure histogram

```
sns.distplot(supercars.top_speed
             ,bins = 30
             ,kde = False
             )
```

Here, we're setting the `kde` parameter to `kde = False` to remove the kde density line

Example 3: create a pure histogram

```
sns.distplot(supercars.top_speed
             ,bins = 30
             ,kde = False
             )
```



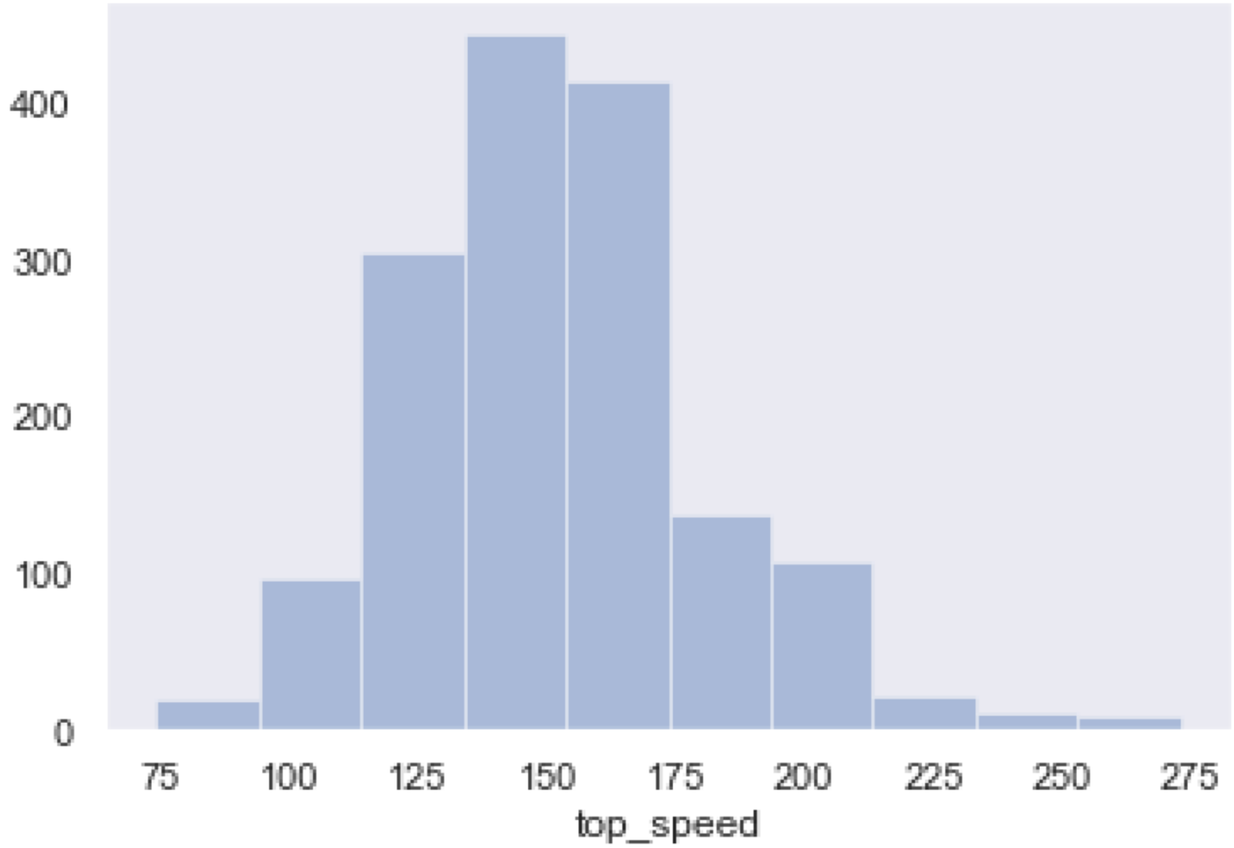
Example 4: change the number of bins

```
sns.distplot(supercars.top_speed
             ,bins = 10
             ,kde = False
             )
```

Here, we're changing the `bins` parameter to create the histogram with a smaller number of bins

Example 4: change the number of bins

```
sns.distplot(supercars.top_speed
             ,bins = 10
             ,kde = False
             )
```



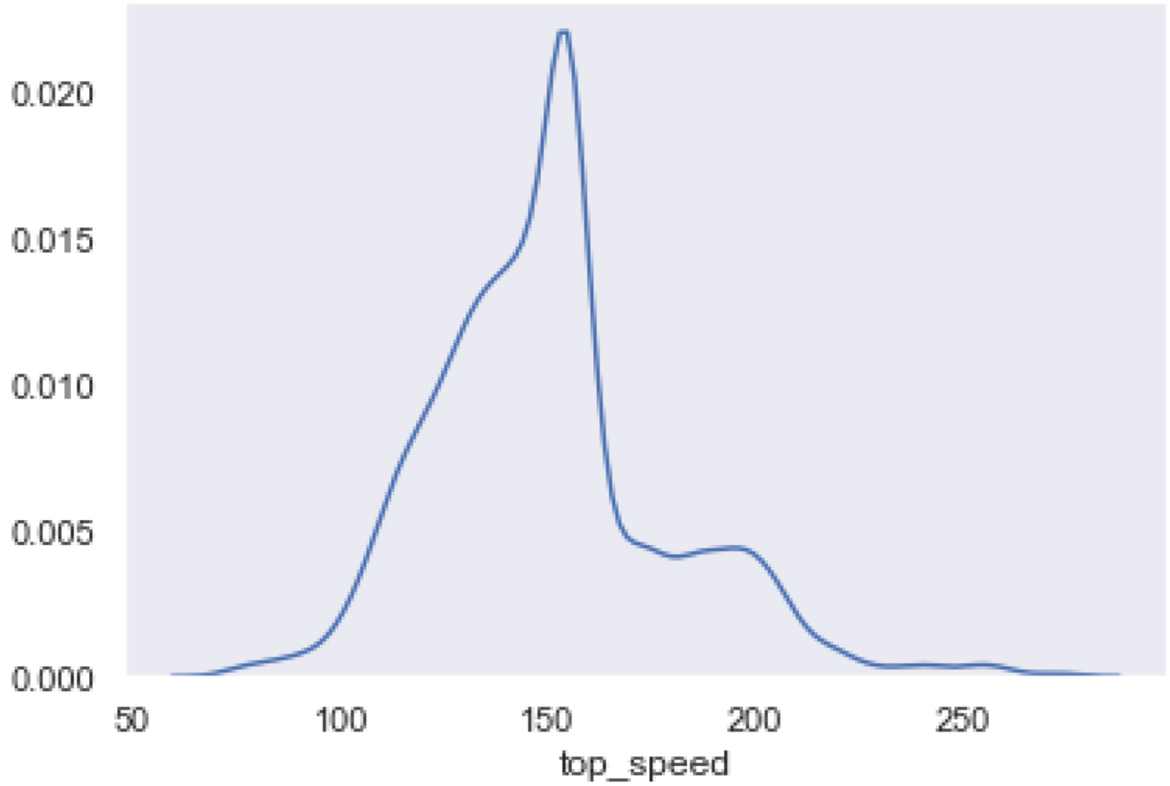
Example 5: create a pure density plot

```
sns.distplot(supercars.top_speed
             ,hist = False
             )
```

Here, we're setting the `hist` parameter to `hist = False` to remove the histogram from the plot

Example 5: create a pure density plot

```
sns.distplot(supercars.top_speed
             ,hist = False
             )
```



Recap

Recap of what we learned

- How to use the `sns.distplot()` function
  - create a combined histogram + KDE plot

- How to modify your distplots
  - change color
  - change the bins in the histogram
  - create a pure histogram
  - create a pure density plot

- **Next Steps**: Watch the code walkthrough videos for step-by-step examples of `sns.distplot()`