Data to Fish

How to Import a CSV File into Python using Pandas

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Need to import a CSV file into Python?

If so, I'll show you the steps to import a CSV file into Python using *pandas.*

To start, here is a simple template that you may use to import a CSV file into Python:

```
import pandas as pd

df = pd.read_csv (r'Path where the CSV file is stored\File name.csv')
print (df)
```

Next, I'll review an example with the steps needed to import your file.

Importing Data into Python

So let's begin with a simple example, where you have the following client list and some additional sales information stored in a CSV file:

Client Name	Country	Product	Purchase Price
Jon Smith	Japan	Computer	$800
Bill Martin	US	Tablet	$450

Maria Blue	Canada	Printer	$150
Rita Yu	Brazil	Laptop	$1,200
Jack Mo	UK	Monitor	$300
Ron Green	Spain	Laptop	$1,200
Jeff Long	China	Laptop	$1,200
Carrie Lan	Italy	Computer	$800
Marry Sig	Peru	Computer	$800
Ben Baker	Russia	Printer	$150

This is how the info would look like in the CSV file (where the file name is '**Clients**'):

	A	B	C	D
1	Client Name	Country	Product	Purchase Price
2	Jon Smith	Japan	Computer	$800
3	Bill Martin	US	Tablet	$450
4	Maria Blue	Canada	Printer	$150
5	Rita Yu	Brazil	Laptop	$1,200
6	Jack Mo	UK	Monitor	$300
7	Ron Green	Spain	Laptop	$1,200
8	Jeff Long	China	Laptop	$1,200
9	Carrie Lan	Italy	Computer	$800
10	Marry Sig	Peru	Computer	$800
11	Ben Baker	Russia	Printer	$150

Steps to Import a CSV File into Python using Pandas

Step 1: Capture the File Path

Firstly, capture the full path where your CSV file is stored. In my case, the CSV file is stored under the following path:

C:\Users\Ron\Desktop\Clients.csv

You'll need to modify the Python code below to reflect the path where the CSV file is stored on *your* computer. Don't forget to include the:

- File name (as highlighted in green). You may choose a different file name, but make sure that the file name specified in the code matches with the actual file name
- File extension (as highlighted in blue). The file extension should always be '.csv' when importing CSV files

Step 2: Apply the Python code

Type/copy the following code into Python, while making the necessary changes to your path.

Here is the code for our example (you can find additional comments within the code itself):

```
import pandas as pd

df = pd.read_csv (r'C:\Users\Ron\Desktop\Clients.csv')   #read the csv f
print (df)
```

Step 3: Run the Code

Finally, run the Python code and you'll get:

	Client Name	Country	Product	Purchase Price
0	Jon Smith	Japan	Computer	$800
1	Bill Martin	US	Tablet	$450
2	Maria Blue	Canada	Printer	$150
3	Rita Yu	Brazil	Laptop	$1,200
4	Jack Mo	UK	Monitor	$300
5	Ron Green	Spain	Laptop	$1,200
6	Jeff Long	China	Laptop	$1,200
7	Carrie Lan	Italy	Computer	$800
8	Marry Sig	Peru	Computer	$800
9	Ben Baker	Russia	Printer	$150

Optional Step: Select Subset of Columns

Now what if you want to select a subset of columns from the CSV file?

For example, what if you want to select only the *Client Name* and *Country* columns. If that's the case, you can specify those columns names as below:

```
import pandas as pd

data = pd.read_csv (r'C:\Users\Ron\Desktop\Clients.csv')
df = pd.DataFrame(data, columns= ['Client Name','Country'])
print (df)
```

You'll need to make sure that the column names specified in the code exactly match with the column names within the CSV file. Otherwise, you'll get NaN values.

Once you're ready, run the code (after adjusting the file path), and you would get only the Client Name and Country columns:

Did you know that you could also import the CSV file into Python without specifying the path?

In the final section of this guide, I'll share the code to create a simple GUI to import a CSV file into Python.

Create a GUI to Import a CSV File into Python

You may use the code below to import a CSV file into Python.

This code uses the tkinter module. Once you run the code, you'll see a small display with a single button to import the CSV file.

```
import tkinter as tk
from tkinter import filedialog
import pandas as pd

root= tk.Tk()

canvas1 = tk.Canvas(root, width = 300, height = 300, bg = 'lightsteelblu
canvas1.pack()

def getCSV ():
    global df

    import_file_path = filedialog.askopenfilename()
    df = pd.read_csv (import_file_path)
    print (df)

browseButton_CSV = tk.Button(text="      Import CSV File     ", command=
canvas1.create_window(150, 150, window=browseButton_CSV)

root.mainloop()
```

Run the code in Python, and you'll get this display:

Simply click on the button, and then choose the location where your CSV file is stored.

Additional Resources

You just saw how to import a CSV file into Python using *pandas.* At times, you may need to import Excel files into Python. If that's the case, you can check the following tutorial that explains how to import an Excel file into Python.

Once you imported your file into Python, you can start calculating some statistics using pandas. Alternatively, you can easily *export* pandas DataFrame into a CSV.

To find out more about using pandas in order to import a CSV file, please visit the pandas documentation.

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