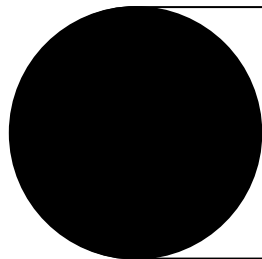Python for marketers

Use cases and working with data

Sridhar Kamma

Lesson overview

1. Working with data using Python
2. Review some marketing use cases for Python

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Python - working with excel data

Create an excel file with sample data,

and have two sheet1 and sheet2

> Output Sheet1 data

> Output Sheet2 data

> Output specific column on Sheet 1

```python
import pandas as pd

df = pd.read_excel (r'/Users/skamma/cxl-training/myexcelfile.xlsx')
print (df)

print('')
print("Printing just the sheet2")
#To read just a sheet within the Excel workbook, below is the code
df = pd.read_excel (r'/Users/skamma/cxl-training/myexcelfile.xlsx', sheet_name='Sheet2')
print (df)

#print the column
print('')
print('Print specific column')
data = pd.read_excel (r'/Users/skamma/cxl-training/myexcelfile.xlsx', sheet_name='Sheet 1')
df_col = pd.DataFrame(data, columns= ['Name'])
print(df_col)
```

```
→  cxl-training python mysampledataapp.py
   Employee ID          Name  Salary Date Started Date Terminated Department
0            1   Mike Thomson   10000   2020-11-10            NaT         IT
1            2  Sara Madison   20000   2020-11-10            NaT  Marketing
2            3     Rob Smith   12000   2020-11-04     2020-12-01         IT
3            4 Theresa Austin   17000   2020-11-30            NaT      Sales

Printing just the sheet2
        Table 1 Unnamed: 1 Unnamed: 2          Unnamed: 3         Unnamed: 4 Unnamed: 5
0  Employee ID          Name     Salary        Date Started     Date Terminated Department
1            3     Rob Smith      12000 2020-11-04 00:00:00 2020-12-01 00:00:00         IT
2            4 Theresa Austin      17000 2020-11-30 00:00:00                 NaN      Sales

Print specific column
            Name
0   Mike Thomson
1   Sara Madison
2      Rob Smith
3  Theresa Austin
→  cxl-training
```

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Python - working with plots

Plot data using plotly library


```python
import numpy as np
import plotly.offline as pyo
import plotly.graph_objs as go

np.random.seed(42)

random_x = np.random.randint(1,101,100)
random_y = np.random.randint(1,101,100)

data = [go.Scatter(x=random_x,y=random_y,mode='markers')]
layout = go.Layout(title='My First Plot Lesson',
                   xaxis= {'title':'X AXIS'},
                   yaxis= dict(title='Y AXIS'),
                   hovermode='closest')

fig = go.Figure(data=data,layout=layout)
pyo.plot(fig, filename='my_scatter.html')
```

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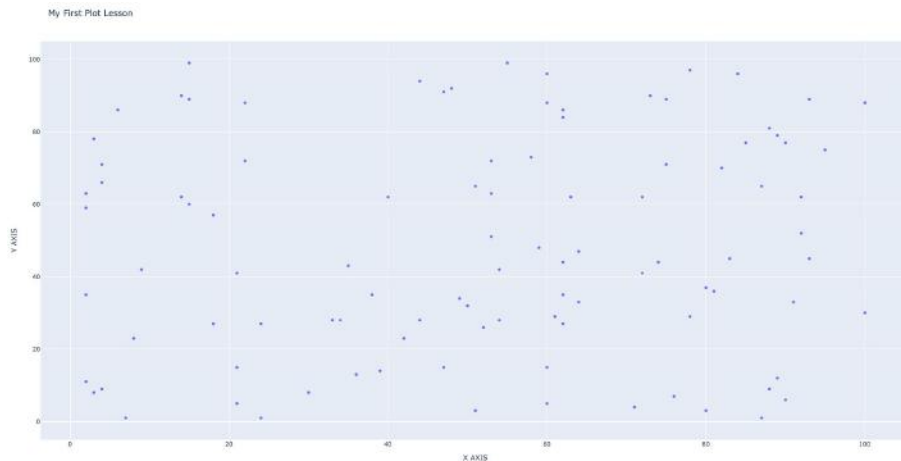
Python - working with plots - bar charts

Plot data using plotly library for bar chart

Read the data from CSV file, and plot as bar chart

```python
myplotlylessonbarchart.py                    mysampledataapp.py
1   import pandas as pd
2   import plotly.offline as pyo
3   import plotly.graph_objs as go
4
5   df = pd.read_csv(r'/Users/skamma/cxl-training/mycsvdatafile/Table1.csv')
6   print (df)
7
8   data = [go.Bar(x=df['Name'],y=df['Salary'])]
9   layout = go.Layout(title='Employee Data')
10  fig = go.Figure(data=data,layout=layout)
11  pyo.plot(fig)
12
```
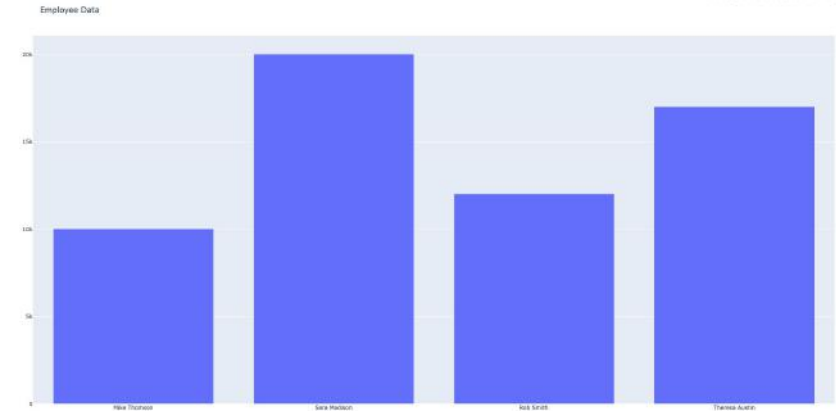
Python - use cases for marketers

➔ Building websites with Flask
➔ Building scrappers for data extraction
➔ Automation:
   - Data mining
   - Reports
   - Campaign automation
   - Data analysis

Lesson takeaways

Understand the how to work with data and Python use cases for marketers

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