Plotter - Leonardo Vazquez

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1 Plotter

[1]:
```
# Import Libraries
import numpy as np
import pandas as pd
import chart_studio.plotly as pl
import plotly.offline as po
import cufflinks as cf
po.init_notebook_mode(connected=True)
cf.go_offline()
```

[2]:
```
# Define DataFrame: Random or from file
def create_rand(r, c):
    return pd.DataFrame(np.random.rand(r, c),columns = [(i+1) for i in range(c)])

def upload_file(file):
    return pd.DataFrame(pd.read_csv(file))
```

[3]:
```
# DataFrame Creation
def creation(data):
    if (data == 1):
        print("--Random Data--")
        r = int(input("Insert number of rows: "))
        c = int(input("Insert number of colums: "))
        return create_rand(r, c)
    elif (data == 2):
        print("--File Data--")
        file = input("Enter the file name: ")
        return upload_file(file)
    else:
        print("--DataFrame creation failed--")
        return create_rand(0,0)
```

[4]:
```
# Plotter
def plotter(plot, df):
    if plot == 1:
        return df.iplot(kind="scatter",colorscale="paired")
    elif plot == 2:
```

```
        return df.iplot(kind="scatter", mode="markers",␣
↪symbol="x",colorscale="paired")
    elif plot == 3:
        return df.iplot(kind="bar",colorscale="paired")
    elif plot == 4:
        return df.iplot(kind="hist",colorscale="paired")
    elif plot == 5:
        return df.iplot(kind="box",colorscale="paired")
    elif plot == 6:
        return df.iplot(kind="surface",colorscale="paired")
    else:
        return print("Select other")
```

[5]:
```
# For columns selections
def col_sel(plot, df, data):
    col = int(input("Enter the number of columns: "))
    li = list()
    if data == 1:
        if col==1:
            coin = int(input("Enter the column you want to plot: "))
            plotter(plot, df[coin-1])
        elif col>1:
            coin = int(input("Insert a column: "))
            li.append(coin)
            for i in range(col-1):
                coin2 = int(input("Insert another column: "))
                li.append(coin2)
            plotter(plot, df[li])
    elif data == 2:
        if col==1:
            coin = input("Enter the column name you want to plot: ")
            plotter(plot, df[coin])
        elif col>1:
            coin = input("Enter the first column name: ")
            li.append(coin)
            for i in range(col-1):
                coin2 = input("Enter another column: ")
                li.append(coin2)
            plotter(plot, df[li])
    else:
        print("Error!")
```

[6]:
```
# Main Programm
def main(df, data):
```

```
    print("\n")
    cat = int(input("You want to plot the complete data (1) or a simple columns␣
↪plot (2)? "))
    print("\n")
    print("--Plotter--")
    print("1. Line Plot")
    print("2. Scatter Plot")
    print("3. Bar Plot")
    print("4. Histogram")
    print("5. Box Plot")
    print("6. Surface plot")
    print("\n")
    plot = int(input("Select the type of plot you need to plot: "))
    if (cat == 2):
        output = col_sel(plot, df, data)
    elif (cat == 1):
        output = plotter(plot, df)
    else:
        print("Try Again.")
```

[7]:
```
# The Plotter
print("---THE PLOTTER ---")
print("Select the type of data you need to plot (By writing 1 or 2)")
print("1. Random Data")
print("2. Upload CSV file") # use agri.csv
data = int(input("Your Choice: "))
df = creation(data)
print(df.head())
main(df, data)
```

```
---THE PLOTTER ---
Select the type of data you need to plot (By writing 1 or 2)
1. Random Data
2. Upload CSV file
Your Choice: 1
--Random Data--
Insert number of rows: 4
Insert number of colums: 6
          1         2         3         4         5         6
0  0.687366  0.444428  0.027441  0.049125  0.203510  0.180486
1  0.737783  0.264144  0.829763  0.169937  0.068932  0.459224
2  0.921879  0.960410  0.015737  0.869523  0.600002  0.615526
3  0.204819  0.011077  0.587243  0.650159  0.826849  0.382233


You want to plot the complete data (1) or a simple columns plot (2)? 1
```

```
--Plotter--
1. Line Plot
2. Scatter Plot
3. Bar Plot
4. Histogram
5. Box Plot
6. Surface plot

Select the type of plot you need to plot: 2
```