`VizPool`: A Python Library with Low-Code support for Basic to Advance Static & Interactive Visualizations

Overview

Welcome to getting started with VizPool; in this introduction to VizPooL, you learn how to use vizpool interactive API for creating static but complex visuals with one line of code. In case you are looking for static visuals, please visit VizPool Static API

Introduction

In this notebook, you will learn how to perform EDA on the **Tips dataset**. You will create impressive interactive visuals with just one line of code.

You will be introduced to a number of class methods to choose from. You can call these methods with specific keyword or positional arguments to generate amazing interactive visuals.

> Following are the main content sections in the notebook:

1. Installations & Imports

```
!pip install --upgrade --quiet vizpool
```

```
#import IPython
#IPython.Application.instance().kernel.do_shutdown(True)
```

```
from vizpool.interactive import EDA
import seaborn as sns
```

2. Exploratory Data Analysis (EDA)

```
#load the dataset and create a pandas dataframe for analysis
df = sns.load_dataset("tips")
df
```

	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4
...	...	...	...	...	...	...	...
239	29.03	5.92	Male	No	Sat	Dinner	3
240	27.18	2.00	Female	Yes	Sat	Dinner	2
241	22.67	2.00	Male	Yes	Sat	Dinner	2
242	17.82	1.75	Male	No	Sat	Dinner	2
243	18.78	3.00	Female	No	Thur	Dinner	2

244 rows × 7 columns

```
#Instantiate the EDA class
tips_eda = EDA(df)
```

> **Note** : Every class method in **VizPooL** returns an `object` with can be stored in a variable to save or use the visual in any other application. refer to the following example;

• Bar chart

```
fig = tips_eda.barchart(categories = 'sex',values = 'tip', aggfunc='count', orientation
fig.write_image("barchart.png")
fig.show()
```

- Heatmap

```
tips_eda.heatmap(index = "day",  columns="size", values='tip')
```

- Stack or Group Chart

Horizontal barchart with barmode defined as `group`

```
tips_eda.stack_or_group_chart(categories='smoker',
                              values =['total_bill','tip', 'size'],
                              barmode='group',
                              orientation='h',
                              aggfunc='mean'
                                )
```

Horizontal barchart with barmode defined as `stack`

```
tips_eda.stack_or_group_chart(categories='smoker',
                              values =['total_bill','tip', 'size'],
                              barmode='stack',
                              orientation='v',
                              aggfunc='mean'
                                )
```

- Pie chart

```
tips_eda.piechart(categories='sex',
                  values='total_bill',
                  width=600, height=450)
```

- Area Chart

```
tips_eda.area_chart(categories='day',
                    values='tip',
```

```
                    aggfunc='median',
                    unit="$")
```

- Bar Line Chart

```
tips_eda.bar_line(categories = 'day',
                  values = ['tip', 'size'],
                  aggfunc=['median', 'mean'],
                  legends = ['median of tips', 'mean of size'],
                  round_decimal=3,
                  width = 800)
```

- Histogram

```
tips_eda.histogram(values = 'tip',
                   color='smoker',
                   marginal='box')
```

- Distribution Plot

```
tips_eda.distplot(values = ['tip', 'size'])
```

- Combined Correlation Plot

```
tips_eda.combined_corr(x_values='total_bill',
                       y_values = 'tip',
                       color='smoker',
                       size = 'size',
                       hover_name='sex')
```

- Multivariate Bubble Chart

```
tips_eda.multivar_bubble_chart(categories = ['day', 'smoker'],
                               values = ['tip', 'total_bill'],
                               aggfunc='sum')
```

- Stacked Area Chart

```
tips_eda.stacked_area_chart(time='day',
                            values = ['tip', 'total_bill', 'size'],
                            aggfunc='median',
                            legend=['Median tip', 'Median bill', 'Median size'],
                            height=450, width=650)
```

- Scatter Plot

```
tips_eda.scatterplot(['total_bill', 'tip'],
                     color='smoker',
                     size = 'size',
                     hover_name='sex')
```

- Facet Grid

```
tips_eda.facetgrid(categories = 'smoker',
                   values='tip',
                   color='time',
                   facet_col='day',
                   facet_row='sex',
                   aggfunc='sum')
```

- Pareto Chart

```
tips_eda.pareto_chart(categories = 'day',
                      values ='tip')
```

End of Notebook

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