

Changing annotations with buttons

Question

A large e-commerce company's sales department has asked you to assist them in understanding and visualizing their data.

They have provided monthly sales data but have different metrics to determine monthly performance: the monthly sales volume (in dollars) as well as sales value (number of items sold).

They would like to view all this information on the same plot but easily be able to toggle annotations on and off to facilitate their discussion around this data.

In this exercise, you will help the sales department by creating a bar chart of their sales data with buttons to turn key annotations on or off.

You have been provided a `sales` DataFrame.

Question Explanation

This task involves creating a bar chart using `plotly.graph_objects` for two metrics: 'Sales Volume' and 'Sales Value'. You must also add interactive buttons to toggle annotations (key data points) on or off.

Answer

Here is the solution to the task:

```
```python
import plotly.graph_objects as go

Assume sales DataFrame is already loaded with columns: 'Month', 'Sales
Volume', 'Sales Value'

Create the basic figure
fig = go.Figure()

Add a trace per metric
fig.add_trace(go.Bar(x=sales['Month'], y=sales['Sales Volume'],
name='Sales Volume'))
fig.add_trace(go.Bar(x=sales['Month'], y=sales['Sales Value'], name='Sales
Value'))
```

```

Add buttons to toggle annotations on/off
buttons = [
 {
 'label': 'Show Annotations',
 'method': 'update',
 'args': [{ 'annotations': [
 { 'x': 'Jan', 'y': sales['Sales Volume'][0], 'text': 'High Volume',
'showarrow': True},
 { 'x': 'Jan', 'y': sales['Sales Value'][0], 'text': 'High Value', 'showarrow':
True}
]}]
 },
 {
 'label': 'Hide Annotations',
 'method': 'update',
 'args': [{ 'annotations': []}]
 }
]

Add the buttons to the layout
fig.update_layout(
 updatemenus=[{
 'type': 'buttons',
 'direction': 'down',
 'x': 1.3,
 'y': 0.5,
 'showactive': True,
 'buttons': buttons
 }]
)

Show the plot
fig.show()
` ``

```

## Answer Explanation

1. The `sales` DataFrame contains monthly sales data with columns for 'Month', 'Sales Volume', and 'Sales Value'.
2. The figure is created using `plotly.graph\_objects`, and two traces are added for 'Sales Volume' and 'Sales Value'.
3. Two buttons are defined: 'Show Annotations' and 'Hide Annotations'.
4. 'Show Annotations' adds key annotations to highlight significant data points, while 'Hide Annotations' removes them.

5. The buttons are integrated into the layout with a vertical arrangement ('down') for interactivity.