```
!pip install --upgrade plotly
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/pub
Requirement already satisfied: plotly in /usr/local/lib/python3.7/dist-packages (5.5.0)
Collecting plotly
  Downloading plotly-5.11.0-py2.py3-none-any.whl (15.3 MB)
     |████████████████████████████████| 15.3 MB 12.0 MB/s
Requirement already satisfied: tenacity>=6.2.0 in /usr/local/lib/python3.7/dist-package
Installing collected packages: plotly
  Attempting uninstall: plotly
    Found existing installation: plotly 5.5.0
    Uninstalling plotly-5.5.0:
      Successfully uninstalled plotly-5.5.0
Successfully installed plotly-5.11.0
```

```
!pip install jupyter-dash
```

```
  Downloading retrying-1.3.3.tar.gz (10 kB)
Collecting nest-asyncio
  Downloading nest_asyncio-1.5.6-py3-none-any.whl (5.2 kB)
Requirement already satisfied: requests in /usr/local/lib/python3.7/dist-packages (f
Requirement already satisfied: ipykernel in /usr/local/lib/python3.7/dist-packages (
Requirement already satisfied: ipython in /usr/local/lib/python3.7/dist-packages (fr
Collecting ansi2html
  Downloading ansi2html-1.8.0-py3-none-any.whl (16 kB)
Requirement already satisfied: flask in /usr/local/lib/python3.7/dist-packages (from
Requirement already satisfied: importlib-metadata in /usr/local/lib/python3.7/dist-p
Requirement already satisfied: plotly>=5.0.0 in /usr/local/lib/python3.7/dist-packag
Collecting dash-html-components==2.0.0
  Downloading dash_html_components-2.0.0-py3-none-any.whl (4.1 kB)
Collecting dash-core-components==2.0.0
  Downloading dash_core_components-2.0.0-py3-none-any.whl (3.8 kB)
Collecting dash-table==5.0.0
  Downloading dash_table-5.0.0-py3-none-any.whl (3.9 kB)
Requirement already satisfied: Werkzeug<2.0,>=0.15 in /usr/local/lib/python3.7/dist-
Requirement already satisfied: Jinja2<3.0,>=2.10.1 in /usr/local/lib/python3.7/dist-
Requirement already satisfied: click<8.0,>=5.1 in /usr/local/lib/python3.7/dist-pack
Requirement already satisfied: itsdangerous<2.0,>=0.24 in /usr/local/lib/python3.7/d
Requirement already satisfied: MarkupSafe>=0.23 in /usr/local/lib/python3.7/dist-pac
Requirement already satisfied: tenacity>=6.2.0 in /usr/local/lib/python3.7/dist-pack
Requirement already satisfied: typing-extensions>=3.6.4 in /usr/local/lib/python3.7/
Requirement already satisfied: zipp>=0.5 in /usr/local/lib/python3.7/dist-packages (
Requirement already satisfied: jupyter-client in /usr/local/lib/python3.7/dist-packa
Requirement already satisfied: tornado>=4.2 in /usr/local/lib/python3.7/dist-package
Requirement already satisfied: traitlets>=4.1.0 in /usr/local/lib/python3.7/dist-pac
Collecting jedi>=0.10
  Downloading jedi-0.18.1-py2.py3-none-any.whl (1.6 MB)
     |████████████████████████████████| 1.6 MB 39.3 MB/s
Requirement already satisfied: pickleshare in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: setuptools>=18.5 in /usr/local/lib/python3.7/dist-pac
Requirement already satisfied: pexpect in /usr/local/lib/python3.7/dist-packages (fr
```

```
Requirement already satisfied: prompt-toolkit<2.1.0,>=2.0.0 in /usr/local/lib/python
Requirement already satisfied: backcall in /usr/local/lib/python3.7/dist-packages (f
Requirement already satisfied: pygments in /usr/local/lib/python3.7/dist-packages (f
Requirement already satisfied: decorator in /usr/local/lib/python3.7/dist-packages (
Requirement already satisfied: parso<0.9.0,>=0.8.0 in /usr/local/lib/python3.7/dist-
Requirement already satisfied: six>=1.9.0 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: wcwidth in /usr/local/lib/python3.7/dist-packages (fr
Requirement already satisfied: jupyter-core>=4.6.0 in /usr/local/lib/python3.7/dist-
Requirement already satisfied: pyzmq>=13 in /usr/local/lib/python3.7/dist-packages (
Requirement already satisfied: python-dateutil>=2.1 in /usr/local/lib/python3.7/dist
Requirement already satisfied: ptyprocess>=0.5 in /usr/local/lib/python3.7/dist-pack
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.7/dist-p
Requirement already satisfied: urllib3!=1.25.0,!=1.25.1,<1.26,>=1.21.1 in /usr/local
Requirement already satisfied: idna<3,>=2.5 in /usr/local/lib/python3.7/dist-package
Requirement already satisfied: chardet<4,>=3.0.2 in /usr/local/lib/python3.7/dist-pa
Building wheels for collected packages: retrying
  Building wheel for retrying (setup.py) ... done
  Created wheel for retrying: filename=retrying-1.3.3-py3-none-any.whl size=11448 sh
  Stored in directory: /root/.cache/pip/wheels/f9/8d/8d/f6af3f7f9eea3553bc2fe6d53e4b
Successfully built retrying
Installing collected packages: jedi, dash-table, dash-html-components, dash-core-com
Successfully installed ansi2html-1.8.0 dash-2.7.0 dash-core-components-2.0.0 dash-ht
```

```
!pip install plotly.express
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/pub
Collecting plotly.express
  Downloading plotly_express-0.4.1-py2.py3-none-any.whl (2.9 kB)
Requirement already satisfied: statsmodels>=0.9.0 in /usr/local/lib/python3.7/dist-pack
Requirement already satisfied: pandas>=0.20.0 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: numpy>=1.11 in /usr/local/lib/python3.7/dist-packages (f
Requirement already satisfied: scipy>=0.18 in /usr/local/lib/python3.7/dist-packages (f
Requirement already satisfied: patsy>=0.5 in /usr/local/lib/python3.7/dist-packages (fr
Requirement already satisfied: plotly>=4.1.0 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: pytz>=2017.3 in /usr/local/lib/python3.7/dist-packages (
Requirement already satisfied: python-dateutil>=2.7.3 in /usr/local/lib/python3.7/dist-
Requirement already satisfied: six in /usr/local/lib/python3.7/dist-packages (from pats
Requirement already satisfied: tenacity>=6.2.0 in /usr/local/lib/python3.7/dist-package
Installing collected packages: plotly.express
Successfully installed plotly.express-0.4.1
```

```
import plotly.graph_objects as go
import plotly.express as px
from jupyter_dash import JupyterDash
import dash_core_components as dcc
import dash_html_components as html
from dash.dependencies import Input, Output
import pandas as pd
```

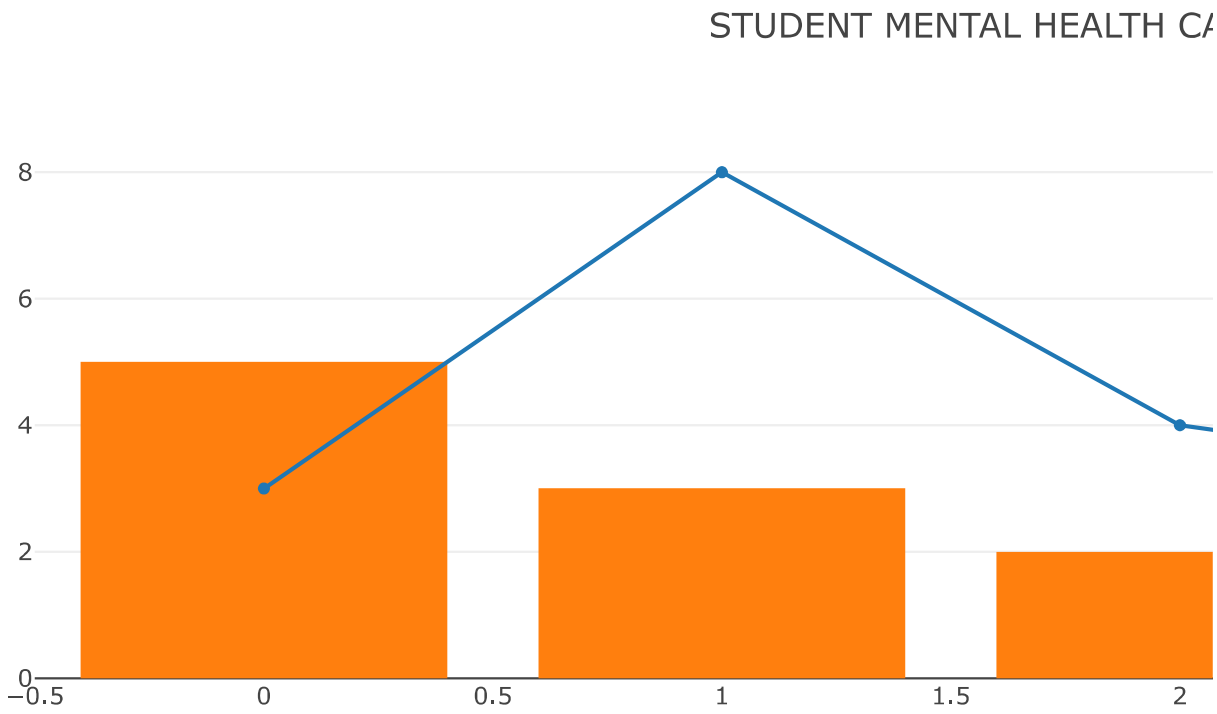
```
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:4: UserWarning:
The dash_core_components package is deprecated. Please replace
`import dash_core_components as dcc` with `from dash import dcc`
  after removing the cwd from sys.path.
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:5: UserWarning:
The dash_html_components package is deprecated. Please replace
```

```
#import plotly and read the csv file(Data Processing)
import pandas as pd
import plotly.express as px
df = pd.read_csv('Survey on Student Mental Health1.csv')
df.head()
```

	Timestamp	Gender	Age	Department	Are_you_happy_with_your_department_work_area	Wh
0	24-08-2022 22:32	Female	18	CSE	Yes	
1	24-08-2022 22:52	Male	18	CSE	Yes	
2	24-08-2022 22:57	Male	19	CSE	Yes	
3	24-08-2022 23:04	Male	24	CSE	No	
4	25-08-2022 19:20	Male	19	CSE	Yes	

```
from google.colab import output
output.enable_custom_widget_manager()
```

```
import plotly.graph_objects as go
import plotly.graph_objects as px
import numpy as np
# load dataset
df = pd.read_csv("Survey on Student Mental Health1.csv")

f = go.FigureWidget()
f
```




```
 f.add_scatter(y=[2, 1, 4, 3]);
```

```
f.add_bar(y=[1, 4, 3, 2]);
```

```
f.layout.title = 'Student Mental Health Care'
```

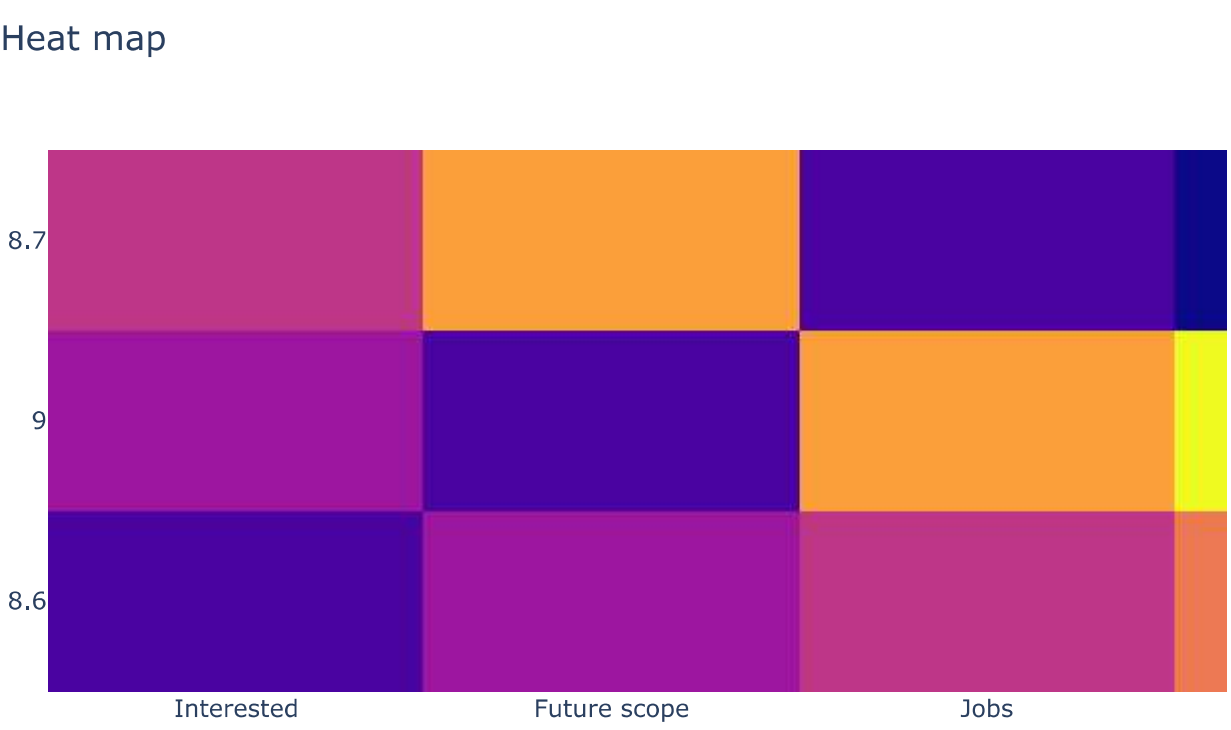
```
# update scatter data
scatter = f.data[0]
scatter.y = [3, 8, 4, 3]
```

```
# update bar data
bar = f.data[1]
bar.y = [5, 3, 2, 8]
```

```
f.layout.title.text = 'STUDENT MENTAL HEALTH CARE'
```

```
import plotly.graph_objects as go
import plotly.graph_objects as px
import numpy as np
# load dataset
```

```
df = pd.read_csv("Survey on Student Mental Health1.csv")

trace = go.Heatmap(z=[[1, 20, 30, 50, 1], [20, 1, 60, 80, 30], [30, 60, 1, -10, 20]],
                   x=['Interested', 'Future scope', 'Jobs', 'By force', 'All are choosen'],
                   y=['8.6', '9', '8.7'])
data=[trace]
layout = go.Layout(title='Heat map')


figure = go.Figure(data=data, layout=layout)

f2 = go.FigureWidget(figure)
f2
```



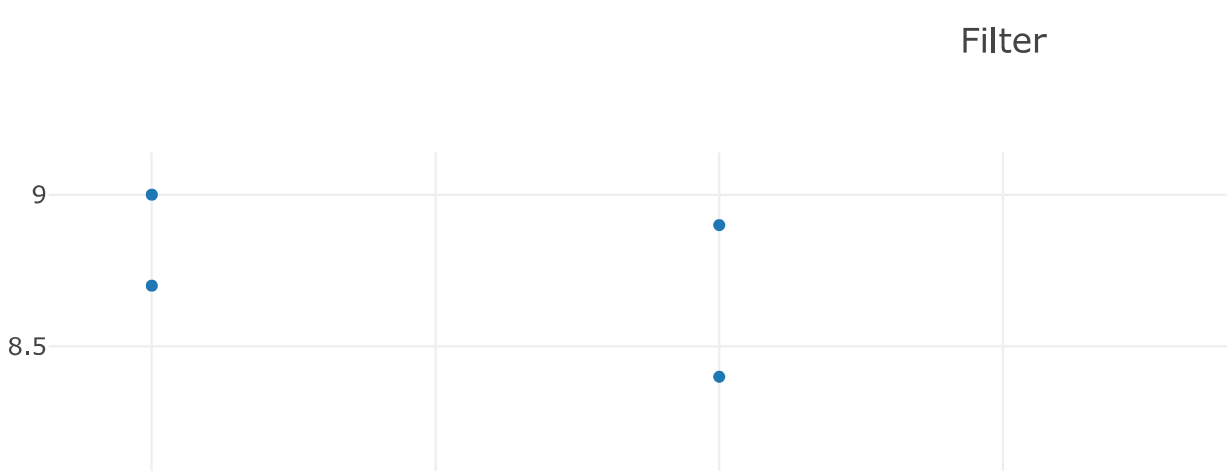

```
import numpy as np


import plotly.graph_objects as go

import pandas as pd

# load dataset
df = pd.read_csv("Survey on Student Mental Health1.csv")

# create figure
fig = go.Figure()
```

```
    # Add surface trace
    fig.add_trace(go.Surface(z=df.values.tolist(), colorscale="Viridis"))

    # Update plot sizing
    fig.update_layout(
        width=800,
        height=900,
        autosize=False,
        margin=dict(t=0, b=0, l=0, r=0),
        template="plotly_white",
    )

    # Update 3D scene options
    fig.update_scenes(
        aspectratio=dict(x=1, y=1, z=0.7),
        aspectmode="manual"
    )

    # Add dropdown
    fig.update_layout(
        updatemenus=[
            dict(
                type = "buttons",
                direction = "left",
                buttons=list([
                    dict(
                        args=["type", "surface"],
                        label="3D Surface",
                        method="restyle"
                    ),
                    dict(
                        args=["type", "heatmap"],
                        label="Heatmap",
                        method="restyle"
                    )
                ]),
                pad={"r": 10, "t": 10},
                showactive=True,
                x=0.11,
                xanchor="left",
                y=1.1,
                yanchor="top"
            ),
        ]
    )

    # Add annotation
    fig.update_layout(
        annotations=[
            dict(text="Trace type:", showarrow=False,
```

```
                                x=0, y=1.08, yref="paper", align="left")
        ]
    )

    fig.show()
```

Trace type: 3D Surface | Heatmap

```
import plotly.io as pio
import plotly.graph_objects as go

import pandas as pd


df = pd.read_csv("Survey on Student Mental Health1.csv")


Reason = ['Interested','Parents force','Future scope','Interested','Everyone are choosing','E
CGPA = [8.7,8,8.4,7.8,8,8.6,8,8.4,7,9,8.9,8,9]

data = [dict(
  type = 'scatter',
  x = Reason,
  y = CGPA,
  mode = 'markers',
  transforms = [dict(
    type = 'filter',
    target = 'y',
    operation = '>',
    value = 4
  )]
)]

layout = dict(
    title = 'Filter'
)

fig_dict = dict(data=data, layout=layout)

pio.show(fig_dict, validate=False)
```




```
import plotly.graph_objects as go

import pandas as pd


df = pd.read_csv("Survey on Student Mental Health1.csv")

# Create figure
fig = go.Figure()

# Add surface trace
fig.add_trace(go.Heatmap(z=df.values.tolist(), colorscale="Viridis"))

# Update plot sizing
fig.update_layout(
    width=800,
    height=900,
    autosize=False,
    margin=dict(t=100, b=0, l=0, r=0),
)

# Update 3D scene options
fig.update_scenes(
    aspectratio=dict(x=1, y=1, z=0.7),
    aspectmode="manual"
)

# Add drowdowns
# button_layer_1_height = 1.08
button_layer_1_height = 1.12
button_layer_2_height = 1.065

fig.update_layout(
    updatemenus=[
        dict(
            buttons=list([
                dict(
```

```
                args=["Can You work when you are stress", "Viridis"],
                label="Viridis",
                method="restyle"
            ),
            dict(
                args=["Can You work when you are stress", "Cividis"],
                label="Cividis",
                method="restyle"
            ),
            dict(
                args=["Can You work when you are stress", "Blues"],
                label="Blues",
                method="restyle"
            ),
            dict(
                args=["Can You work when you are stress", "Greens"],
                label="Greens",
                method="restyle"
            ),
        ]),
        type = "buttons",
        direction="right",
        pad={"r": 10, "t": 10},
        showactive=True,
        x=0.1,
        xanchor="left",
        y=button_layer_1_height,
        yanchor="top"
    ),
    dict(
        buttons=list([
            dict(
                args=["reversescale", False],
                label="Yes",
                method="restyle"
            ),
            dict(
                args=["reversescale", True],
                label="No",
                method="restyle"
            )
        ]),
        type = "buttons",
        direction="right",
        pad={"r": 10, "t": 10},
        showactive=True,
        x=0.13,
        xanchor="left",
        y=button_layer_2_height,
        yanchor="top"
    ),
```

```
            dict(
                buttons=list([
                    dict(
                        args=[{"contours.showlines": False, "type": "contour"}],
                        label="Hide lines",
                        method="restyle"
                    ),
                    dict(
                        args=[{"contours.showlines": True, "type": "contour"}],
                        label="Show lines",
                        method="restyle"
                    ),
                ]),
                type = "buttons",
                direction="right",
                pad={"r": 10, "t": 10},
                showactive=True,
                x=0.5,
                xanchor="left",
                y=button_layer_2_height,
                yanchor="top"
            ),
        ]
    )

    fig.update_layout(
        annotations=[
            dict(text="colorscale", x=0, xref="paper", y=1.1, yref="paper",
                                align="left", showarrow=False),
            dict(text="Reverse<br>Colorscale", x=0, xref="paper", y=1.06,
                                yref="paper", showarrow=False),
            dict(text="Lines", x=0.47, xref="paper", y=1.045, yref="paper",
                                showarrow=False)
        ])

    fig.show()
```


```
import plotly.graph_objects as go

import pandas as pd


df = pd.read_csv("Survey on Student Mental Health1.csv")


import numpy as np
x0 = np.random.normal(2, 0.4, 400)
y0 = np.random.normal(2, 0.4, 400)
x1 = np.random.normal(3, 0.6, 600)
y1 = np.random.normal(6, 0.4, 400)
x2 = np.random.normal(4, 0.2, 200)
y2 = np.random.normal(4, 0.4, 200)
```

```
# Create figure
fig = go.Figure()

# Add traces
fig.add_trace(
    go.Scatter(
        x=x0,
        y=y0,
        mode="markers",
        marker=dict(color="Orange")
    )
)

fig.add_trace(
    go.Scatter(
        x=x1,
        y=y1,
        mode="markers",
        marker=dict(color="Red")
    )
)




# Add buttons that add shapes
cluster0 = [dict(type="circle",
                            xref="x", yref="y",
                            x0=min(x0), y0=min(y0),
                            x1=max(x0), y1=max(y0),
                            line=dict(color="Yellow"))]
cluster1 = [dict(type="circle",
                            xref="x", yref="y",
                            x0=min(x1), y0=min(y1),
                            x1=max(x1), y1=max(y1),
                            line=dict(color="Crimson"))]


fig.update_layout(
    updatemenus=[
        dict(
            type="buttons",
            buttons=[
                dict(label="Dont Know",
                     method="relayout",
                     args=["shapes", []]),
                dict(label="Yes ",
                     method="relayout",
```

```
                    args=["shapes", cluster0]),
                dict(label="No ",
                    method="relayout",
                    args=["shapes", cluster1]),
                dict(label="All",
                    method="relayout",
                    args=["shapes", cluster0 + cluster1])
            ],
        )
    ]
)

# Update remaining layout properties
fig.update_layout(
    title_text="Student Mental Health",
    showlegend=False,
)

fig.show()
```

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0s completed at 9:29 PM