

PYTHON

1.2 - Charts

```
In [1]: import pandas as pd
import numpy as np
import matplotlib as plt
import plotly.express as px
```

```
In [2]: #approval_df = pd.read_excel("obama-approval-ratings.xls")

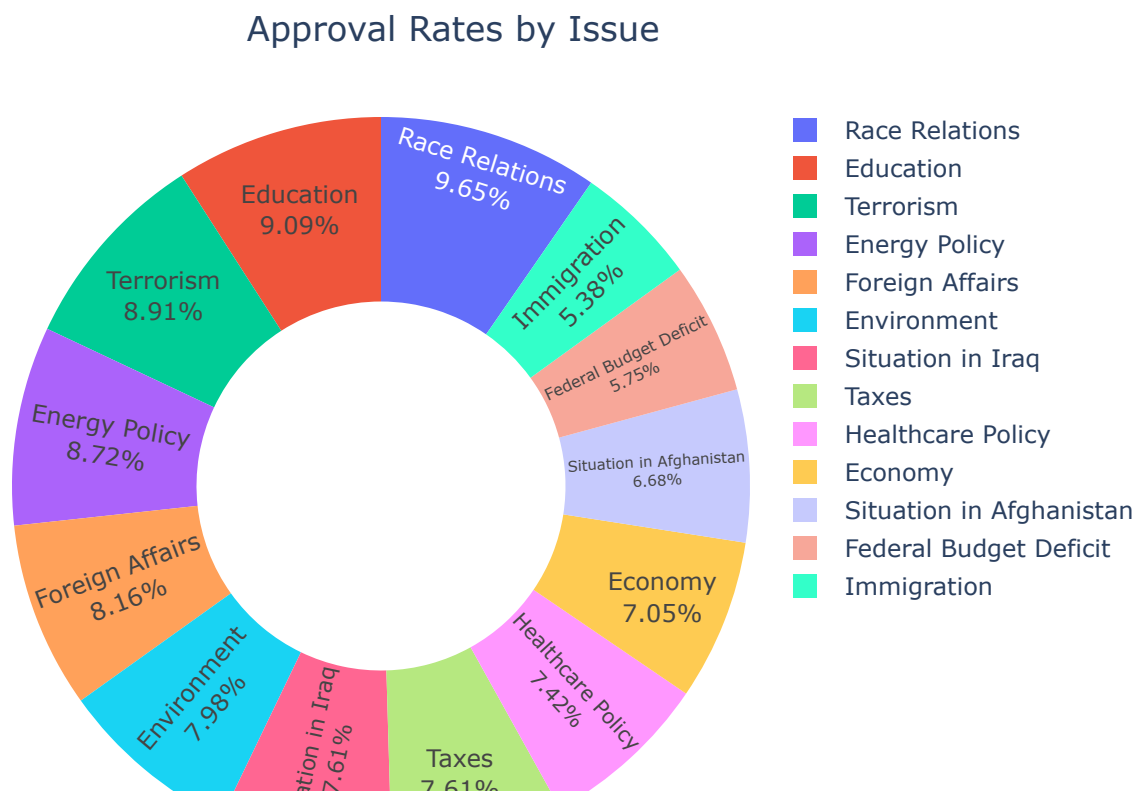
approval_df = pd.read_excel('obama-approval-ratings.xls', sheet_name='Sheet1')
approval_df.head(5)
```

```
Out[2]:
```

	Issue	Approve	Disapprove	None
0	Race Relations	52	38	10
1	Education	49	40	11
2	Terrorism	48	45	7
3	Energy Policy	47	42	11
4	Foreign Affairs	44	48	8

Donut Chart

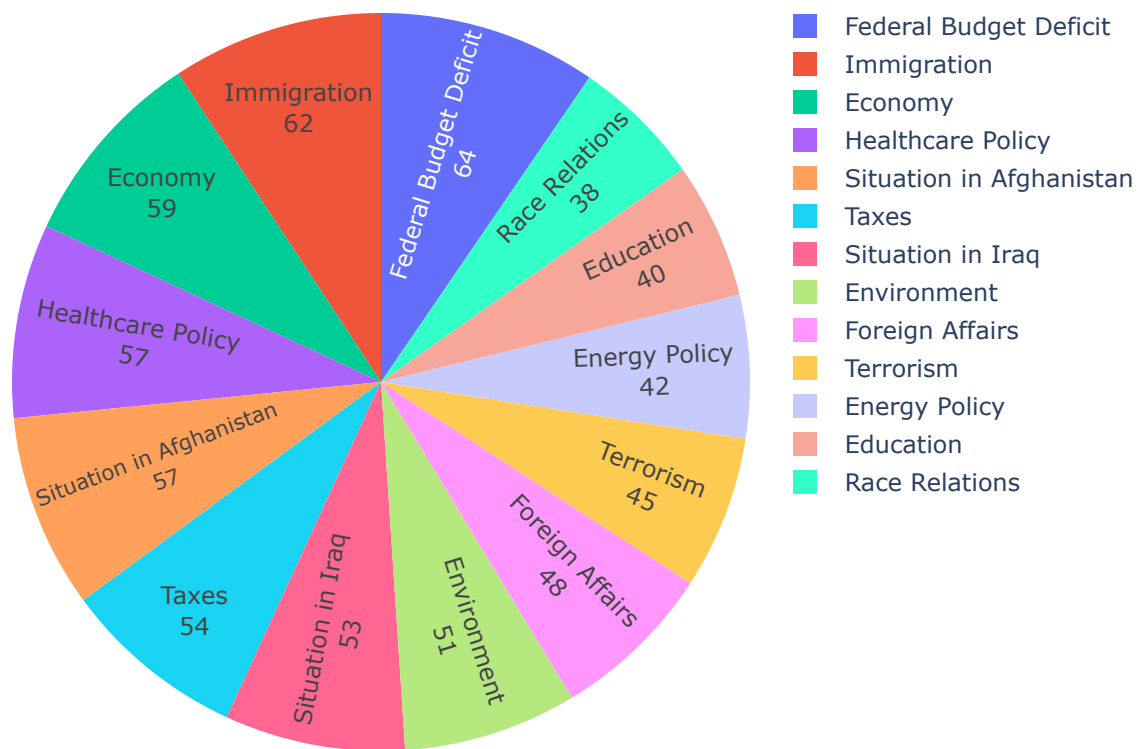
```
In [3]: fig = px.pie(approval_df, values="Approve", names="Issue", hole=.5)
fig.update_traces(textposition='inside', textinfo='percent+label')
fig.update_layout(title_text="Approval Rates by Issue", title_x=0.3)
fig.show("notebook")
```



Pie Chart

```
In [4]: fig = px.pie(approval_df, values="Disapprove", names="Issue")
fig.update_traces(textposition='inside', textinfo='value+label')
fig.update_layout(title_text="Disapproval Counts per Issue", title_x=0.3)
fig.show("notebook")
```

Disapproval Counts per Issue

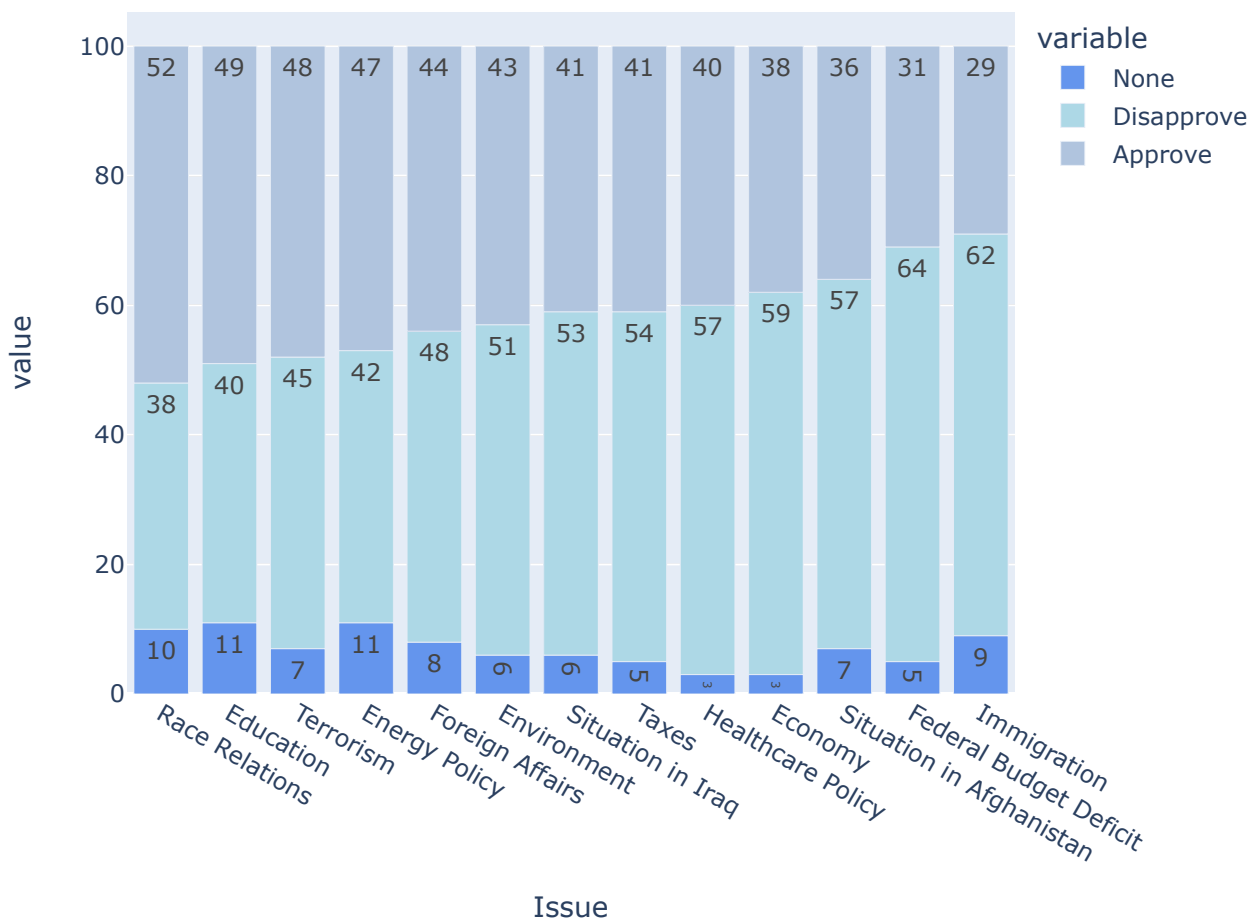


Stacked Bar Chart

```
In [5]: colors = [ # matplotlib named colors
                  'cornflowerblue', 'lightblue', 'lightsteelblue',
                  # any color using the color codes
                  "#a977e2"]
fig = px.bar(approval_df, x="Issue", y=['None', 'Disapprove', 'Approve'],
             color_discrete_sequence=colors, text_auto=True)
fig.update_layout(title_text="Approval, Disapproval and Not-Accounted(None) counts by Is
fig.show('notebook')
```

Approval Disapproval and Not-Accounted(None) counts by Is

Approval, Disapproval and Not-Accounted(Not-Accounted=None) counts by Issue



Bar Chart

```
In [6]: fig = px.bar(approval_df, x="Issue", y='Disapprove',text_auto=True)
fig.update_layout(title_text="Disapproval counts per Issue", title_x=0.3)
fig.show('notebook')
```

Disapproval counts per Issue



Line Chart

```
In [7]: fig = px.line(approval_df, x="Issue", y=['Disapprove', 'Approve'])
fig.update_layout(title_text="Approvals and Disapproval by Issue", title_x=0.3)
fig.show('notebook')
```

