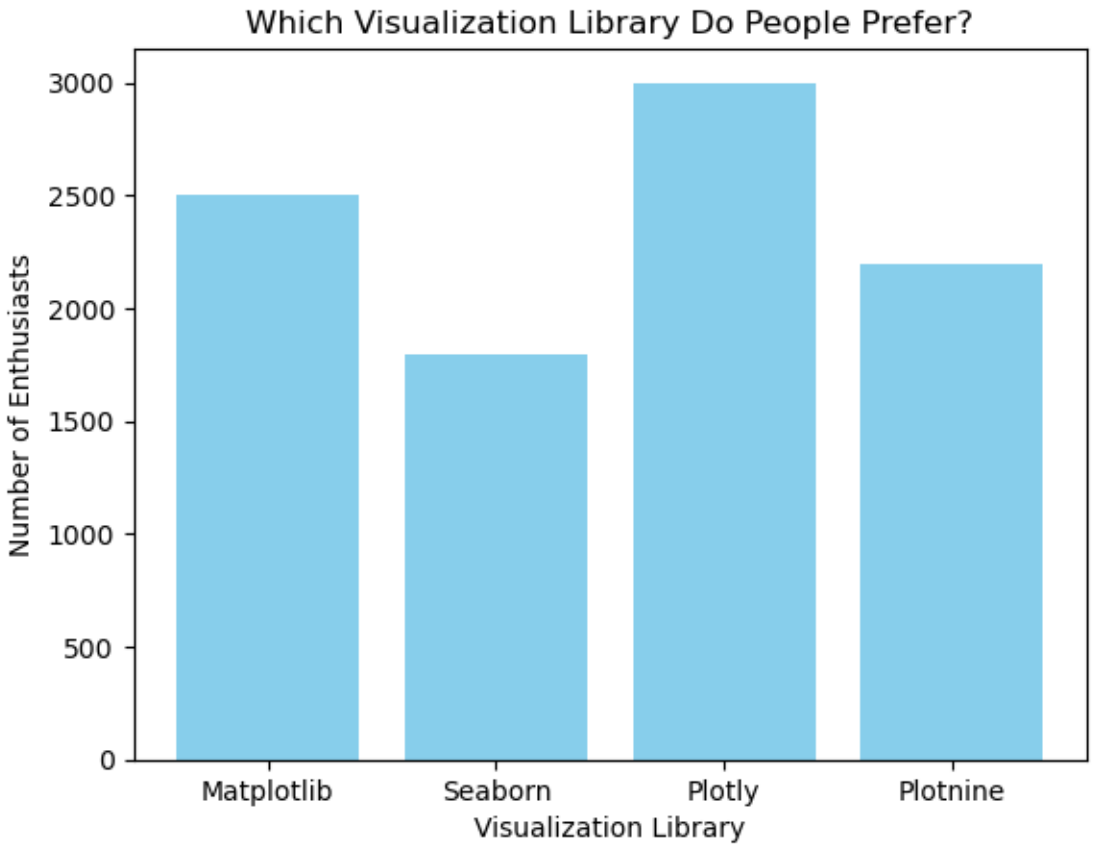
Experiment II [3]

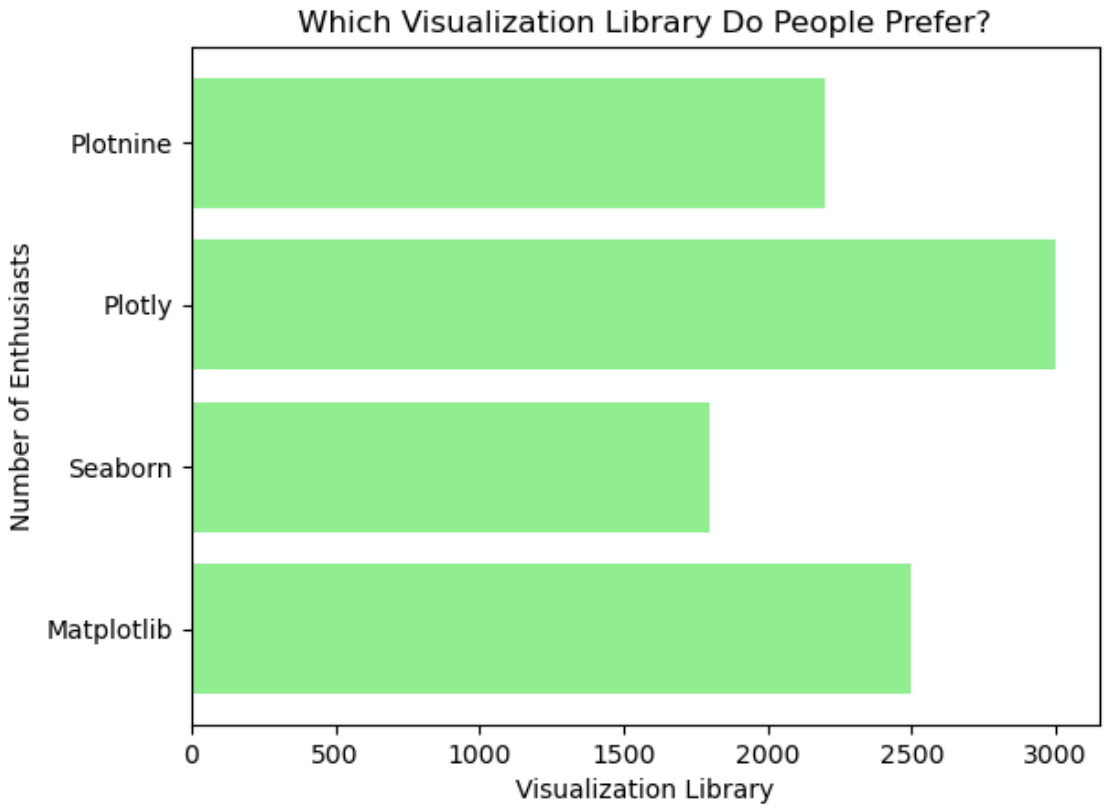
August 17, 2025

[1]:
```
import matplotlib.pyplot as plt
# Number of preferences for different libraries
library = ['Matplotlib', 'Seaborn', 'Plotly', 'Plotnine']
chosen_by = [2500, 1800, 3000, 2200]
```

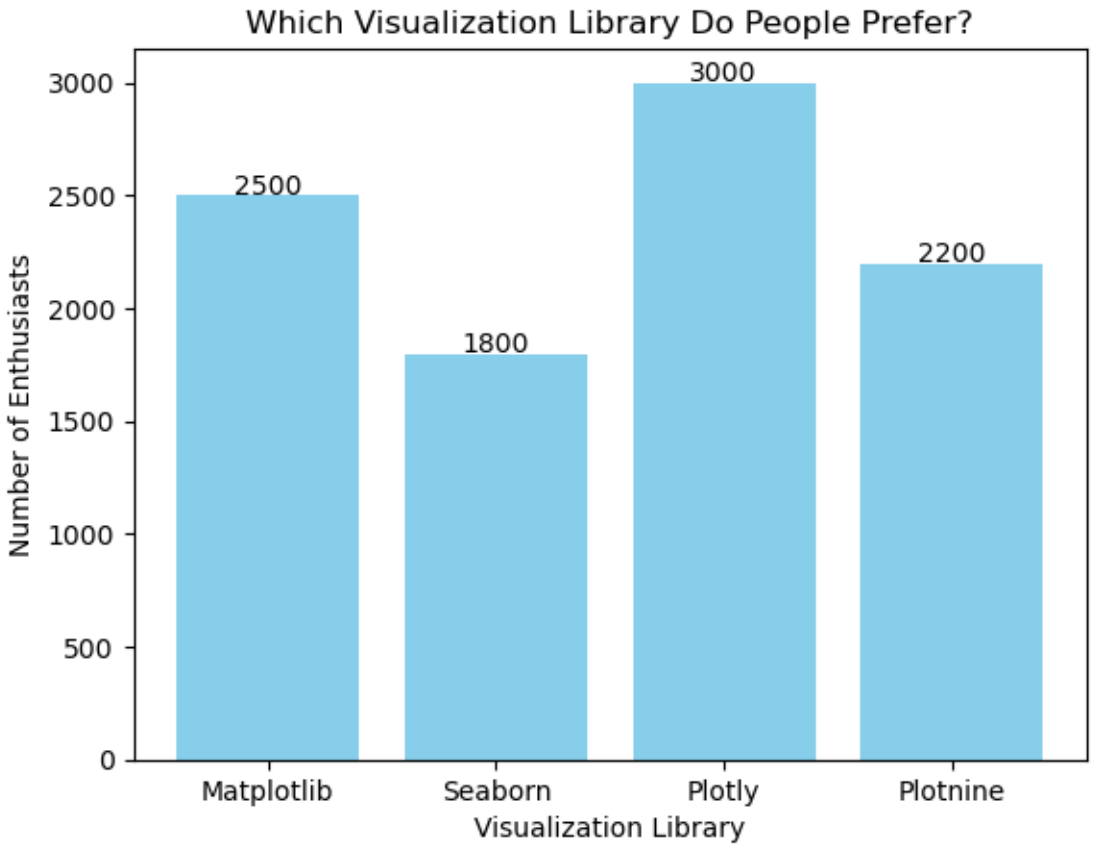
[2]:
```
# Vertical Bar Plot
plt.bar(library, chosen_by, color='skyblue')
plt.xlabel('Visualization Library')
plt.ylabel('Number of Enthusiasts')
plt.title('Which Visualization Library Do People Prefer?')
plt.show()
```



[3]:
```
# Horizontal Bar Plot
plt.barh(library, chosen_by, color='lightgreen')
plt.xlabel('Visualization Library')
plt.ylabel('Number of Enthusiasts')
plt.title('Which Visualization Library Do People Prefer?')
plt.show()
```

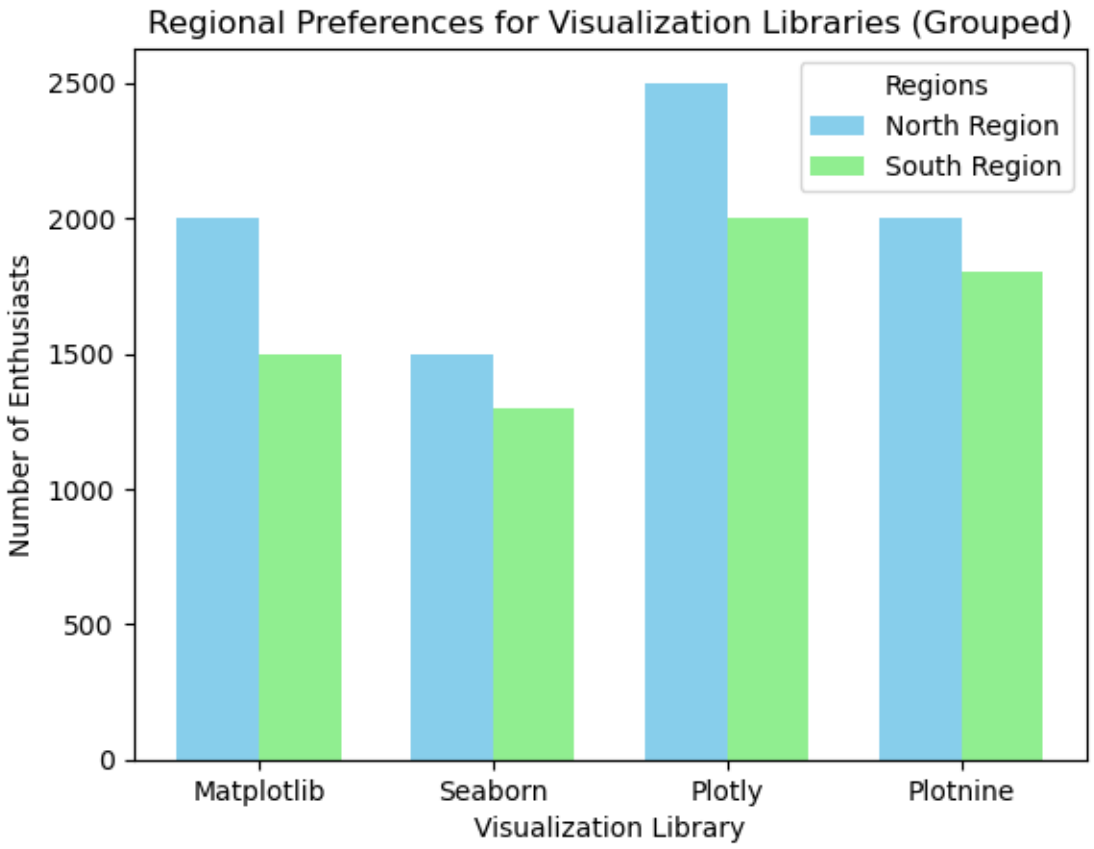


[4]:
```
plt.bar(library, chosen_by, color='skyblue')
plt.xlabel('Visualization Library')
plt.ylabel('Number of Enthusiasts')
plt.title('Which Visualization Library Do People Prefer?')

# Adding annotations
for i, value in enumerate(chosen_by):
    plt.text(i, value + 5, str(value), ha='center')
plt.show()
```



[5]:
```
import numpy as np

# Define library names
library = ['Matplotlib', 'Seaborn', 'Plotly', 'Plotnine']

# Number of Enthusiasts for different regions
enthusiasts_north = [2000, 1500, 2500, 2000]
enthusiasts_south = [1500, 1300, 2000, 1800]
bar_width = 0.35
x = np.arange(len(library))

# Grouped Bar Plot
plt.bar(x - bar_width/2, enthusiasts_north, bar_width, label='North Region',␣
 ↪color='skyblue')
plt.bar(x + bar_width/2, enthusiasts_south, bar_width, label='South Region',␣
 ↪color='lightgreen')

# Adding labels and title
plt.xlabel('Visualization Library')
```

```
plt.ylabel('Number of Enthusiasts')
plt.title('Regional Preferences for Visualization Libraries (Grouped)')
plt.xticks(x, library)
plt.legend(title='Regions')
plt.show()
```



[6]:
```
# Define library names
library = ['Matplotlib', 'Seaborn', 'Plotly', 'Plotnine']

# Number of Enthusiasts for different regions
enthusiasts_north = [2000, 1500, 2500, 2000]
enthusiasts_south = [1500, 1300, 2000, 1800]
x = np.arange(len(library))

# Stacked Bar Plot
plt.bar(x, enthusiasts_north, label='North Region', color='skyblue')
plt.bar(x, enthusiasts_south, bottom=enthusiasts_north, label='South Region',␣
 ↪color='lightcoral')
```

```
# Adding labels and title
plt.xlabel('Visualization Library')
plt.ylabel('Number of Enthusiasts')
plt.title('Regional Preferences for Visualization Libraries (Stacked)')
plt.legend()
plt.show()
```