

Task 7: To generate insight using Text Network Analysis and Visualization

Tools: Wordle, Tag Cloud, WordTree, InfraNodus

7a) TagCrowd tool using Build a word cloud it contains your details.

Aim:

To create a word cloud visualization using the TagCrowd tool to highlight frequently used words from a given text (e.g., personal details or descriptive paragraph).

Algorithm:

1. Open the TagCrowd website (<https://tagcrowd.com>).
2. Enter or paste your text data (for example: name, skills, hobbies, education, etc.).
3. Select parameters such as language, number of words to display, and case sensitivity.
4. Click "Visualize!" to generate the word cloud.
5. Observe the visualization — larger words represent higher frequency.

Code:

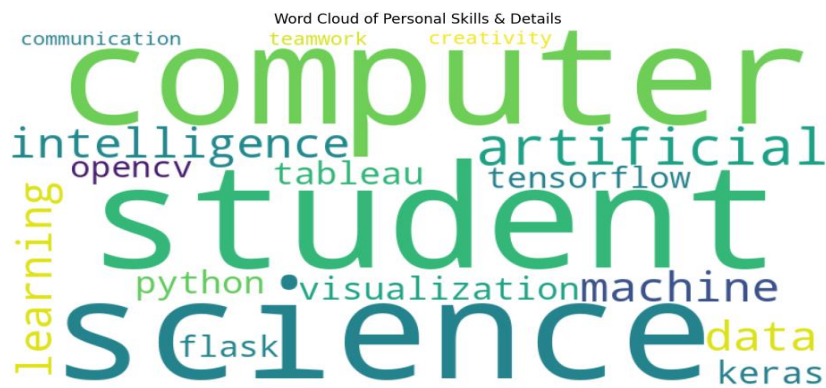
```
# Install the wordcloud library if not already installed
# pip install wordcloud matplotlib
import matplotlib.pyplot as plt
from wordcloud import WordCloud

# Sample text (you can replace this with your own details)
text = """
I'm student computer science artificial intelligence machine learning
data visualization python tableau keras tensorflow opencv flask creativity
teamwork communication
"""

# Create a WordCloud object
wordcloud = WordCloud(width=800, height=400, background_color='white',
                      colormap='viridis', max_words=50).generate(text)
```

```
# Display the generated Word Cloud
plt.figure(figsize=(12, 6))
plt.imshow(wordcloud, interpolation='bilinear')
plt.axis('off')
plt.title("Word Cloud of Personal Skills & Details")
plt.show()
```

Output:



Result:

A TagCrowd word cloud was successfully created, visually representing the most frequent and relevant words from the given text, providing clear insight into key themes and areas of focus.

7 b) Utilize wordtree package to generate the cloud of text and to plot graph using matplotlib library and visualize it.

Algorithm:

- Import necessary libraries:
- Import WordCloud from the WordCloud library for word cloud creation.
- Import matplotlib.pyplot as plt for data visualization.
- Define the text from which you want to create a word cloud. In this case, it's stored in the details variable
- Create a WordCloud object with specific parameters: Set the width and height of the word cloud image.
- Specify the background color (white in this case).
- Provide a list of stopwords to exclude common words (an empty list in this case).
- Set the minimum font size for displayed words. Create a Matplotlib figure for displaying the word cloud
- Define the figure size (5x5 inches in this case) and specify the facecolor (None, which is transparent).
- Generate the word cloud image using the generate method of the WordCloud object, passing in the text from step 2
- Display the word cloud image:
- Use plt.imshow to display the word cloud. Turn off the axis to remove axis labels. Adjust the layout to minimize padding. Show the word cloud using plt.show().
- End of the algorithm.

Code:

```
from wordcloud import WordCloud
```

```
import matplotlib.pyplot as plt
```

```
details = "Data visualization is the visual and interactive exploration and graphic  
representation of data of any type. This course covers data visualization concepts, practices,  
and tools particularly for analyzing and presenting business data. Students will evaluate,  
design, and develop effective visualizations and dashboards, using various development  
tools"
```

```
wordcloud = WordCloud(width = 800, height = 800,
```

```
background_color ='white',
```

```
stopwords = [],
```

```
min_font_size = 10).generate(details)
```

```
plt.figure(figsize = (5, 5), facecolor = None)
```

plt.show()



A TagCrowd word cloud was successfully created, visually representing the most frequent and relevant words from the given text, providing clear insight into key themes and areas of focus.