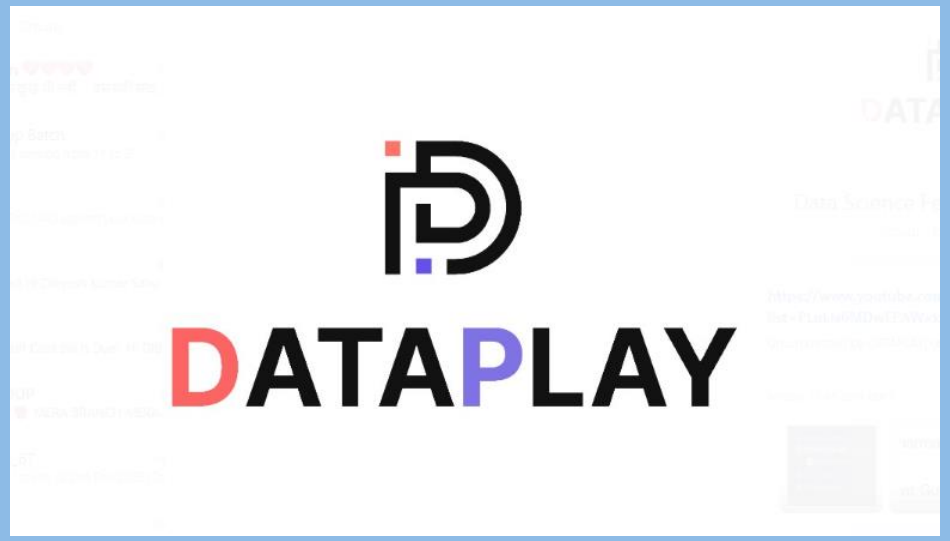
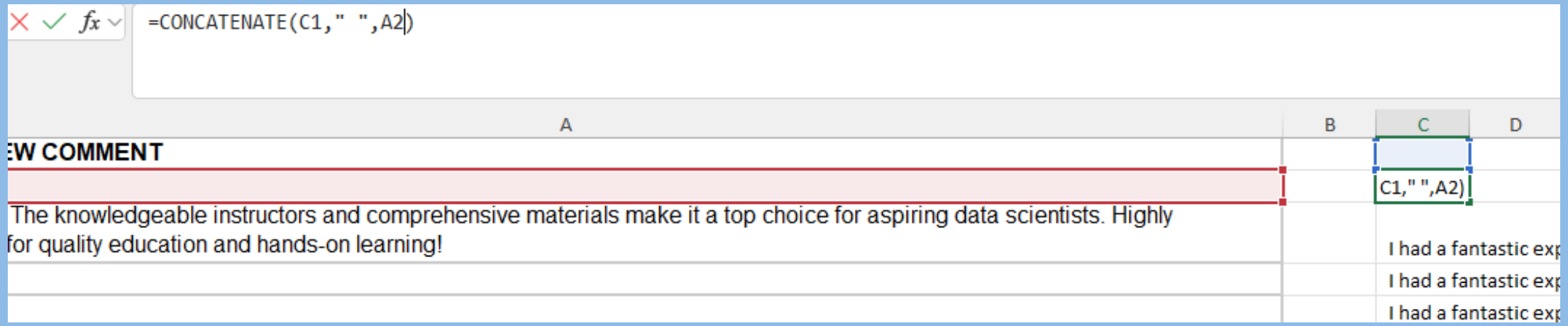
Project: Creating Wordcloud using Python in Excel



We are going to use google reviews by students for Dataplay as the dataset. We need some data cleaning before we can finally create the wordcloud. Let’s proceed.

Steps

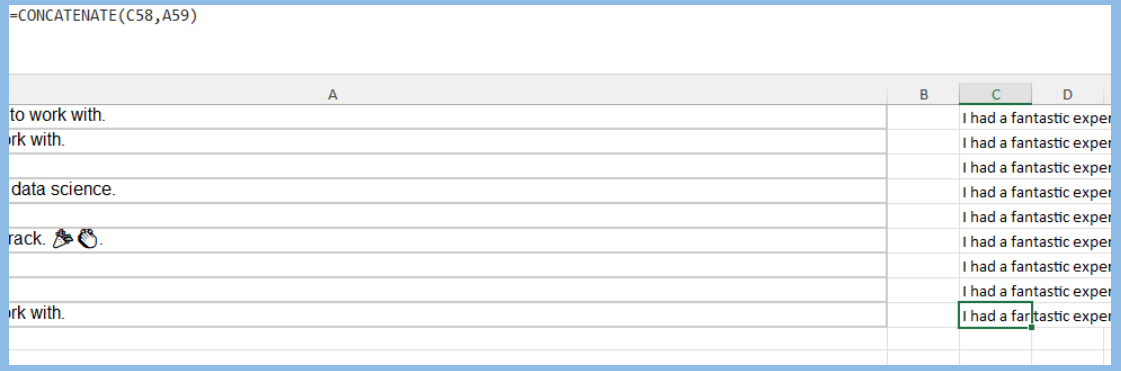
1. To get all the reviews in a single cell, let us start with using concatenate function-

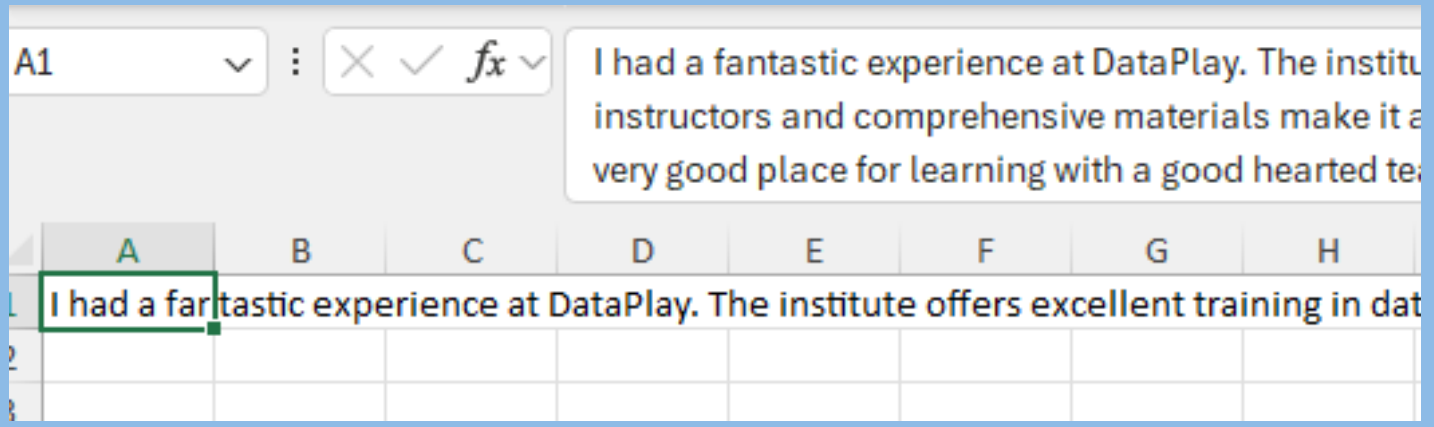


Steps

By dragging down to the lowermost cell, we get all the content in a single cell.

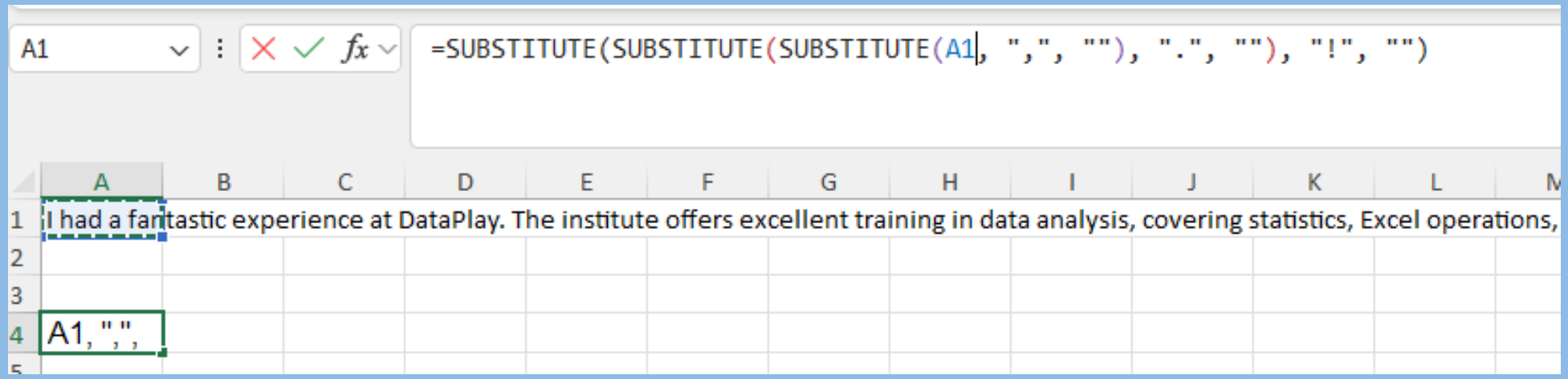
2. Let us copy and paste the value of that particular cell into another cell.





Steps

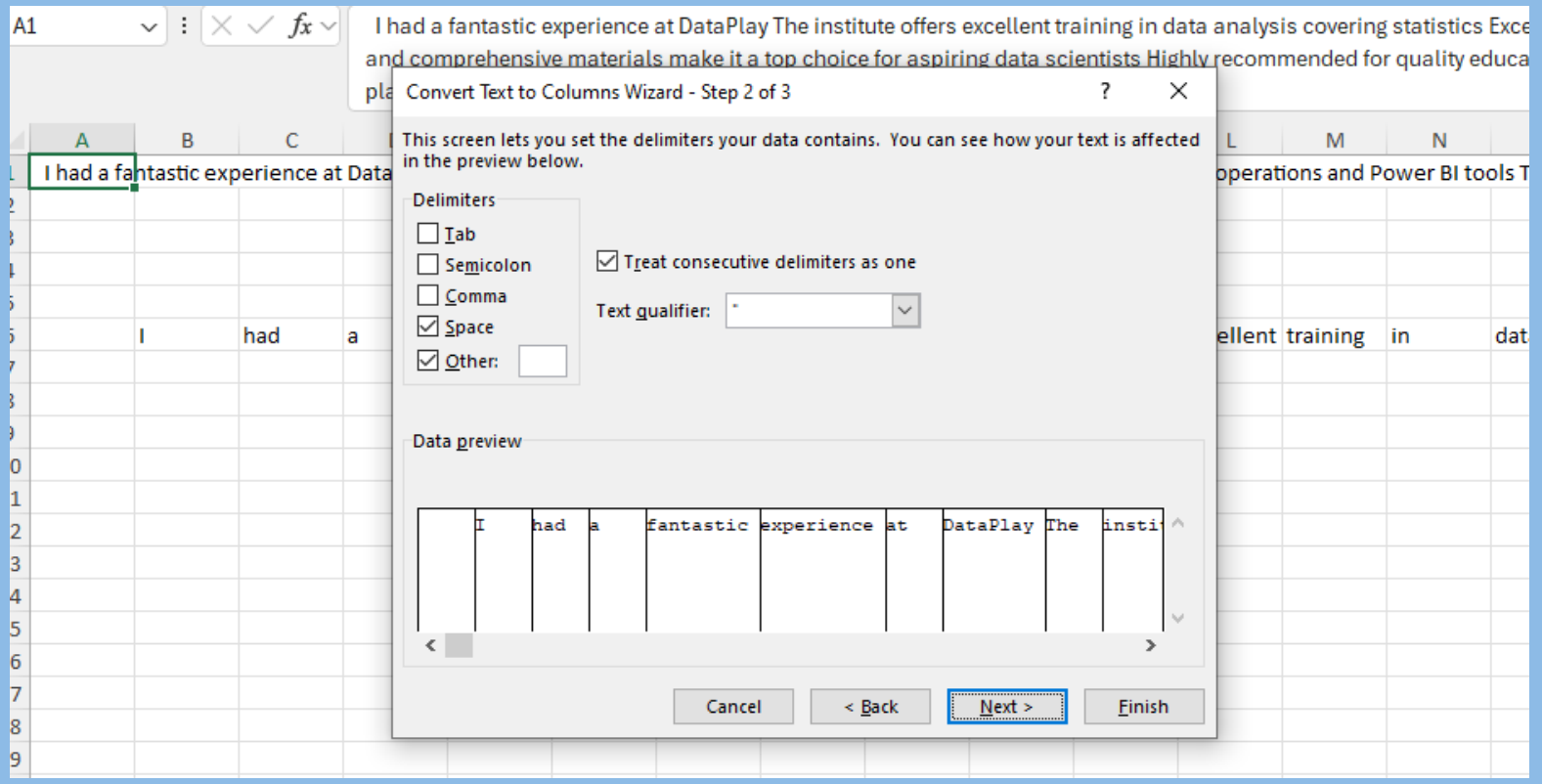
3. Let us replace all the commas, full-stops and exclamation marks with an empty string “” .



Let us copy and paste the cell value to another cell.

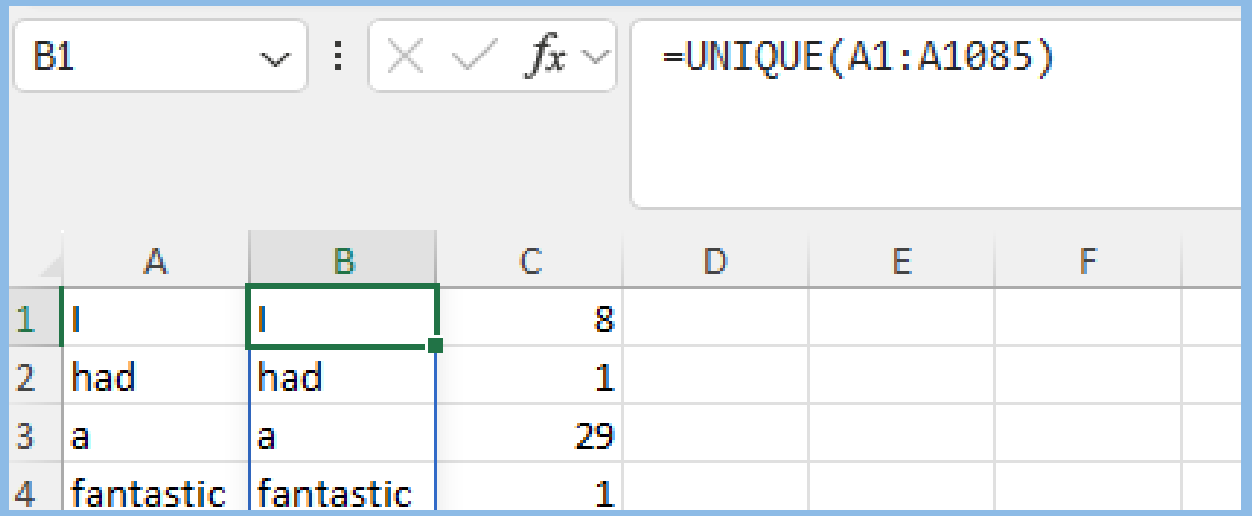
Steps

4. Now, let us separate out all the words using ‘text-to-columns’ option. The delimiters should be space and line-breaks. For line-breaks, we need to use ctrl+j in ‘other’.

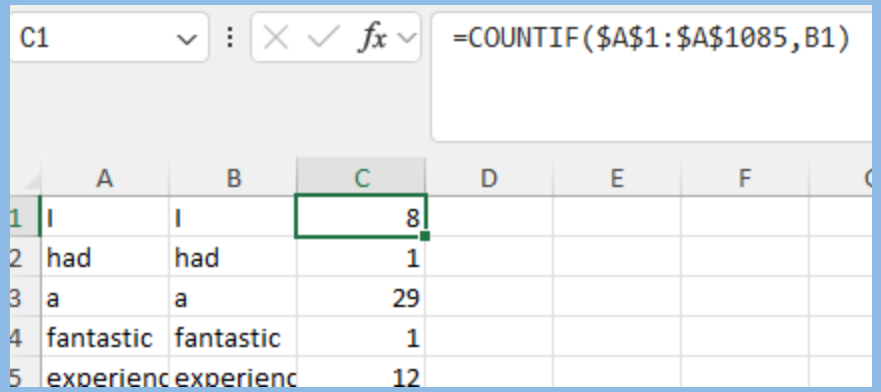


Steps

5. For proper navigation, we copied and pasted the data using transpose. Now, using the UNIQUE() function, we got a series of words which are unique without any duplication.

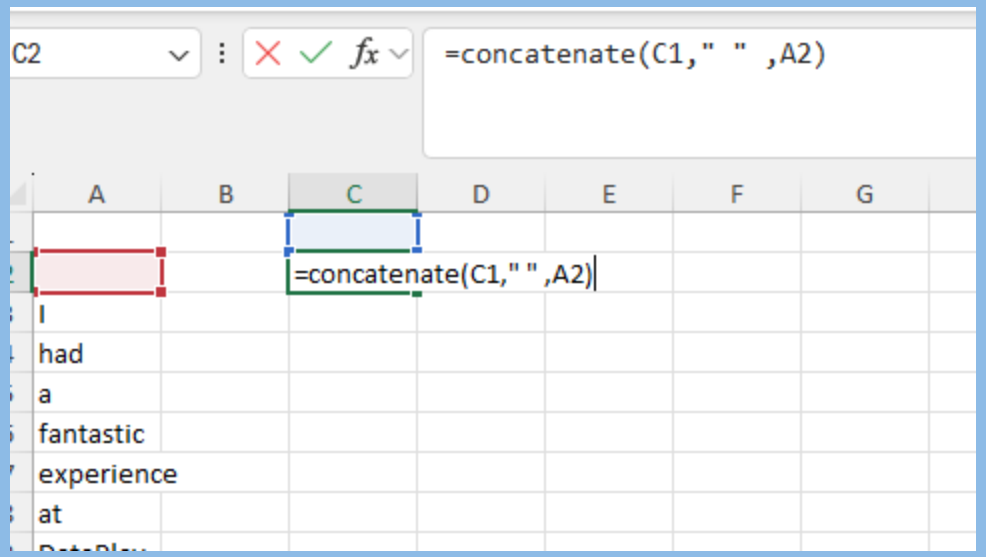


Now, using COUNTIF() function, we got the count of the repetition of each unique word.



Steps

6. Again, we copied and pasted the dataset in transposed state in another sheet. Then, we joined all the single words using spaces in between to get the string data in a single cell.

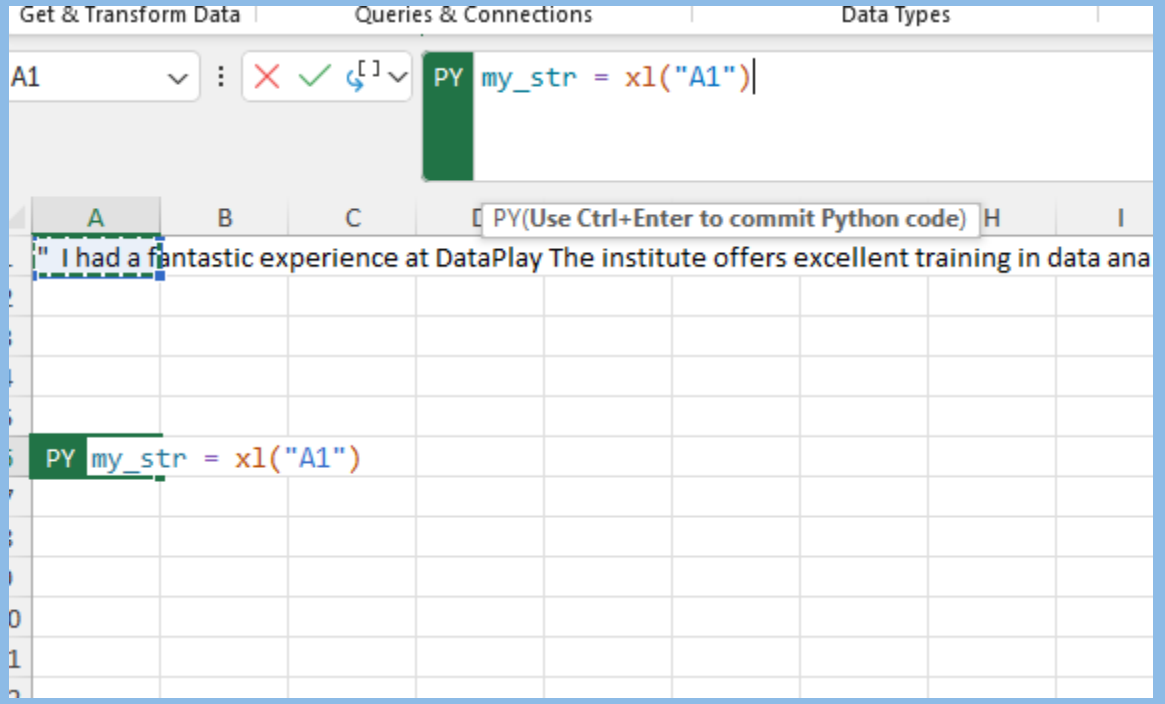


By dragging it to the last cell, we got all the words in a single cell.

Steps

7. After copying and pasting the values to another cell, we put the whole string inside “”.

8. In Python code, we saved the whole string into the variable my_str.



Steps

9. In another cell, using Python we run the following code:

```python
from wordcloud import WordCloud, STOPWORDS
import matplotlib.pyplot as plt
from sklearn.feature_extraction.text import CountVectorizer

# Input text (replace this with your actual text)
text = my_str

# Define stopwords and add "data" to the list
stopwords = set(STOPWORDS)
stopwords.add("data")

# Generate bigrams from the text
def generate_bigrams(text):
    words = text.split()
    bigrams = [' '.join(pair) for pair in zip(words, words[1:])]
    return ' '.join(words + bigrams)

# Prepare the text with bigrams
text_with_bigrams = generate_bigrams(text)

# Create a WordCloud instance
wordcloud = WordCloud(stopwords=stopwords, width=800, height=400, background_color='white', colormap='viridis').generate(text_with_bigrams)

# Display the Word Cloud
plt.figure(figsize=(10, 5))
plt.imshow(wordcloud, interpolation='bilinear')
plt.axis('off')
plt.title("Word Cloud: Unigrams and Bigrams (Excluding Stopwords)", fontsize=16)
plt.show()
```

Steps

10. Finally, we got this Wordcloud.