

```
In [1]: # !pip install wordcloud pillow matplotlib scikit-learn requests
```

```
In [2]: import requests
import numpy as np
from PIL import Image
import matplotlib.pyplot as plt
from wordcloud import WordCloud
from sklearn.feature_extraction.text import TfidfVectorizer
```

Intel MKL WARNING: Support of Intel(R) Streaming SIMD Extensions 4.2 (Intel(R) SSE4.2) enabled only processors has been deprecated. Intel oneAPI Math Kernel Library 2025.0 will require Intel(R) Advanced Vector Extensions (Intel(R) AVX) instructions.

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```
In [3]: # Download "The Adventures of Sherlock Holmes" (ID: 1661)
url = "https://www.gutenberg.org/files/1661/1661-0.txt"
response = requests.get(url)
book_text = response.text
```

```
In [4]: # Prepare corpus for TF-IDF
corpus = [book_text]

vectorizer = TfidfVectorizer(stop_words='english')
tfidf_matrix = vectorizer.fit_transform(corpus)
tfidf_scores = tfidf_matrix.toarray()[0]
words = vectorizer.get_feature_names_out()

word_tfidf = dict(zip(words, tfidf_scores))
```

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In [5]: # Load plane silhouette mask
mask = np.array(Image.open("/Users/kajalchuri/Downloads/plane.jpeg"))
```

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In [6]: # Generate the word cloud
wc = WordCloud(
    background_color="white",
    mask=mask,
    max_words=300,
    contour_width=1,
    contour_color="royalblue"
)

wc.generate_from_frequencies(word_tfidf)
```

```
Out[6]: <wordcloud.wordcloud.WordCloud at 0x12c38d220>
```

```
In [7]: # Plot the word cloud
plt.figure(figsize=(20, 12))
plt.imshow(wc, interpolation="bilinear")
plt.axis("off")
plt.show()
```



```
In [8]: mask = np.array(Image.open("/Users/kajalchuri/Downloads/owl.jpeg"))

wc = WordCloud(
    background_color="white",
    mask=mask,
    max_words=300,
    contour_width=1,
    contour_color="silver"
)

wc.generate_from_frequencies(word_tfidf)
```

```
Out[8]: <wordcloud.wordcloud.WordCloud at 0x11358d850>
```

[illegible]

```
Out[12]: <wordcloud.wordcloud.WordCloud at 0x10de61340>
```

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