In [2]:
```
pip install praw
```

```
Requirement already satisfied: praw in c:\users\baki akgun\new folder\lib\site-packages (7.7.1)Note: you may nee
d to restart the kernel to use updated packages.

Requirement already satisfied: prawcore<3,>=2.1 in c:\users\baki akgun\new folder\lib\site-packages (from praw)
(2.4.0)
Requirement already satisfied: update-checker>=0.18 in c:\users\baki akgun\new folder\lib\site-packages (from pr
aw) (0.18.0)
Requirement already satisfied: websocket-client>=0.54.0 in c:\users\baki akgun\new folder\lib\site-packages (fro
m praw) (0.58.0)
Requirement already satisfied: requests<3.0,>=2.6.0 in c:\users\baki akgun\new folder\lib\site-packages (from pr
awcore<3,>=2.1->praw) (2.31.0)
Requirement already satisfied: six in c:\users\baki akgun\appdata\roaming\python\python311\site-packages (from w
ebsocket-client>=0.54.0->praw) (1.16.0)
Requirement already satisfied: charset-normalizer<4,>=2 in c:\users\baki akgun\new folder\lib\site-packages (fro
m requests<3.0,>=2.6.0->prawcore<3,>=2.1->praw) (2.0.4)
Requirement already satisfied: idna<4,>=2.5 in c:\users\baki akgun\new folder\lib\site-packages (from requests<3
.0,>=2.6.0->prawcore<3,>=2.1->praw) (3.4)
Requirement already satisfied: urllib3<3,>=1.21.1 in c:\users\baki akgun\new folder\lib\site-packages (from requ
ests<3.0,>=2.6.0->prawcore<3,>=2.1->praw) (2.0.7)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\baki akgun\new folder\lib\site-packages (from requ
ests<3.0,>=2.6.0->prawcore<3,>=2.1->praw) (2024.2.2)
```

In [3]:
```
import praw
```

In [4]:
```
reddit = praw.Reddit(
    client_id = "R355m7jOp6-TswgScCzkvQ",
    client_secret ="9D3hVOcM4WmXCa8uytGOfT_6_BqbRg",
    user_agent = "my-app by u/Brilliant_Sock_2545 ",
    username = "Brilliant_Sock_2545",
    password ="Password",

)
```

In [5]:
```
subreddit = reddit.subreddit("python")
```

In [6]:
```
top_posts = subreddit.top(limit = 10)
new_posts = subreddit.new(limit = 10)

for post in top_posts:
    print("Title -", post.title)
    print("ID-", post.id)
    print("Author -", post.author)
    print("URL - ", post.url)
    print("Score - ", post.score)
    print("Comment count - ", post.num_comments)
    print("Created - ", post.created_utc)
    print("\n")
    print("********************************************")
```

```
Title - Lad wrote a Python script to download Alexa voice recordings, he didn't expect this email.
ID- g53lxf
Author - iEslam
URL -  https://i.redd.it/2s0dj8ob12u41.png
Score -  12345
Comment count -  133
Created -  1587424299.0


********************************************
Title - This post has:
ID- hoolsm
Author - Krukerfluk
URL -  https://www.reddit.com/r/Python/comments/hoolsm/this_post_has/
Score -  9232
Comment count -  435
Created -  1594386373.0


********************************************
Title - I redesign the Python logo to make it more modern
ID- gftejm
Author - jessjwilliamson
URL -  https://i.redd.it/rxezjyf4ojx41.png
Score -  7863
Comment count -  265
Created -  1588945149.0


********************************************
Title - Automate the boring stuff with python - tinder
```

```
ID- 7kpme8
Author - backprop88
URL -  https://gfycat.com/PointlessSimplisticAmericanquarterhorse
Score -  6724
Comment count -  325
Created -  1513644476.0


**********************************************
Title - I'm excited to share my first published book, Introduction to Python Programming for Business and Social
Science Applications -- specifically geared towards students not specifically in computer science
ID- irh8l0
Author - paulkaefer
URL -  https://i.redd.it/ebmh8z3c8rm51.png
Score -  6508
Comment count -  249
Created -  1599933196.0


**********************************************
Title - Drawing Mona Lisa with 256 circles using evolution [Github repo in comments]
ID- gn9add
Author - Itwist101
URL -  https://v.redd.it/nyzyx7uyfwz41
Score -  5717
Comment count -  121
Created -  1589972294.0


**********************************************
Title - I made a simulation using Python in which a neural network learns to race
ID- hqc7ol
Author - atqm-
URL -  https://v.redd.it/bgmc6q20ela51
Score -  5689
Comment count -  212
Created -  1594632457.0


**********************************************
Title - Thanks to everyone’s advice, my mouse drawing algorithm has gotten much better and faster!
ID- ghxqod
Author - Nekose
URL -  https://v.redd.it/sktc30zom7y41
Score -  5542
Comment count -  203
Created -  1589235279.0


**********************************************
Title - Debugging Cheat Sheet
ID- iehths
Author - HotTeenBoy
URL -  https://i.redd.it/p1i8awsivji51.jpg
Score -  5451
Comment count -  112
Created -  1598100424.0


**********************************************
Title - Just trying to create a orbit system in python and this happened...
ID- dg0etx
Author - LAMagicx
URL -  https://v.redd.it/8i70ps8doqr31
Score -  5178
Comment count -  360
Created -  1570724490.0


**********************************************
```

In [7]:
```python
post = reddit.submission(id = "hqc7ol")

comments = post.comments

for comment in comments[:2]:
    print("Printing comment...")
    print("Comment body- ", comment.body)
    print("Author -" , comment.author)
    print("\n")
```

```
Printing comment...
Comment body-  It would be great to show an animation example of how the trained model performs on an unseen tra
ck.
Author - DmitryBalabka


Printing comment...
Comment body-  [Longer version on Youtube](https://youtu.be/B0ptl-NChJQ)

Tools:

* pyglet for graphics
* numpy for nn

EDIT:

Thank you guys for all the feedback! This is my first bigger programming project and  I'm glad you like it.

* There is a lot of source code requests and I am currently working on it. My code is a mess because I never rea
lly thought I would share this project with someone. Its also written in czech :D When I'm done, **I'll make ano
ther post.**
* To train the NN I used a simple evolutionary algorithm. Best (fastest) cars in each generation are chosen to b
e parents of next slightly mutated generation. The NN has 2 hidden layers (5x4x4x2)
* I will also train the NN on other tracks.

**EDIT 2:**

[**GITHUB REPO**](https://github.com/aTom995/NeuralNetworkRacing)
Author - atqm-
```

In [8]:
```python
from collections import Counter
import re
```

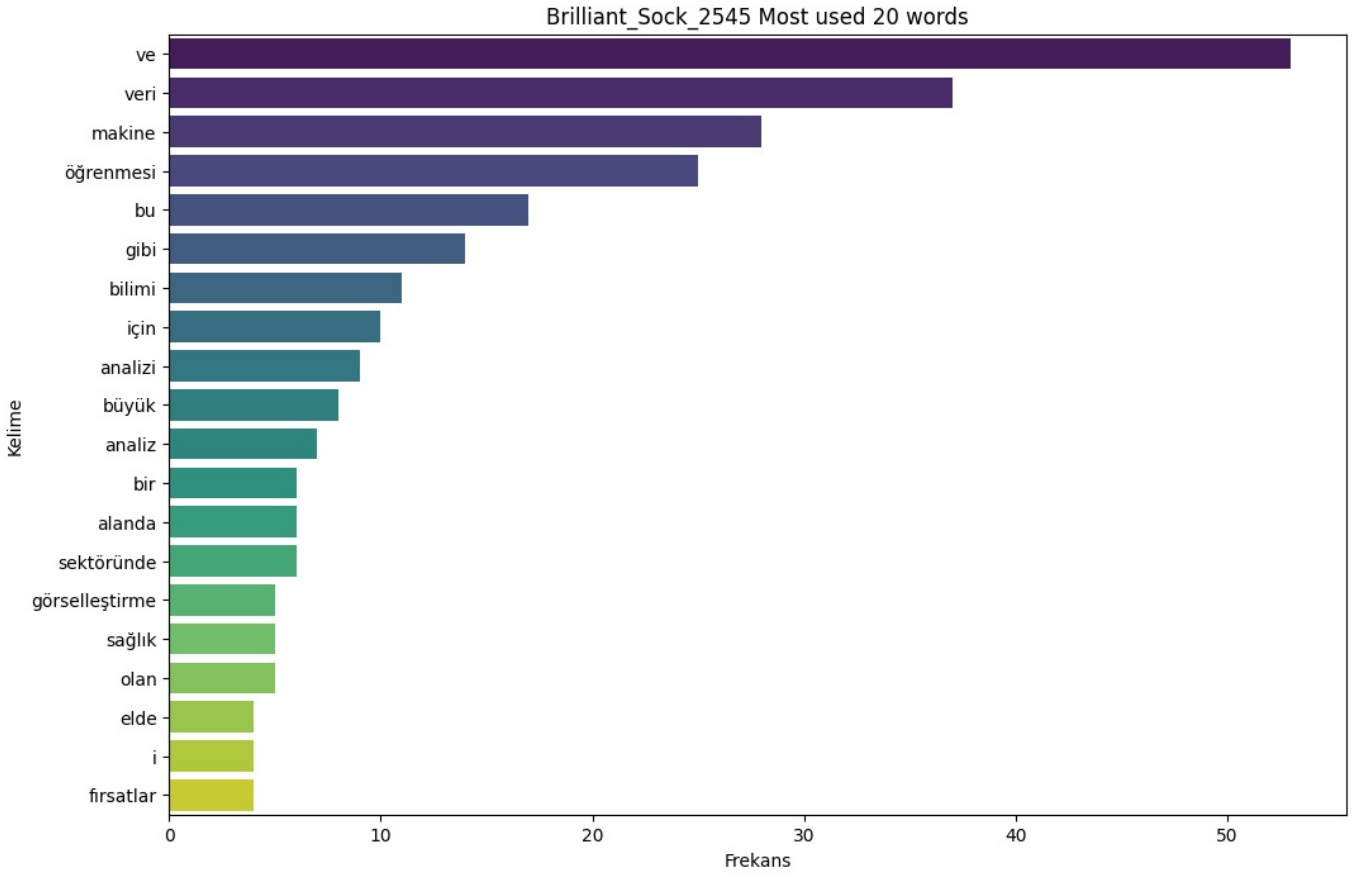
In [9]:
```python
#KELİME FREKANSI

# Add a username
username = 'Brilliant_Sock_2545'

# collect user's comments and responses
user = reddit.redditor(username)
posts = user.submissions.new(limit=None)
comments = user.comments.new(limit=None)

# merge all text from comments and responses
all_texts = ''
for post in posts:
    all_texts += post.title + ' ' + post.selftext + ' '
for comment in comments:
    all_texts += comment.body + ' '

words = re.findall(r'\b\w+\b', all_texts.lower())
word_counts = Counter(words)

# word frequency
for word, count in word_counts.most_common(20):
    print(f'{word}: {count}')
```

```
ve: 53
veri: 37
makine: 28
öğrenmesi: 25
bu: 17
gibi: 14
bilimi: 11
için: 10
analizi: 9
büyük: 8
analiz: 7
bir: 6
alanda: 6
sektöründe: 6
görselleştirme: 5
sağlık: 5
olan: 5
elde: 4
i: 4
fırsatlar: 4
```

In [10]:
```python
#Data Visualization

import matplotlib.pyplot as plt
import seaborn as sns
```

```
# add username
username = 'Brilliant_Sock_2545'

# collect all user's posts and comments
user = reddit.redditor(username)
posts = user.submissions.new(limit=None)
comments = user.comments.new(limit=None)

#  merge all texts from comments and posts
all_texts = ''
for post in posts:
    all_texts += post.title + ' ' + post.selftext + ' '
for comment in comments:
    all_texts += comment.body + ' '

# split and clean words process
words = re.findall(r'\b\w+\b', all_texts.lower())
word_counts = Counter(words)

# take the most frequency 20 words
most_common_words = word_counts.most_common(20)
words, counts = zip(*most_common_words)

# Vissualization word frequency
plt.figure(figsize=(12, 8))
sns.barplot(x=list(counts), y=list(words), palette='viridis')
plt.xlabel('Frekans')
plt.ylabel('Kelime')
plt.title(f'{username} Most used 20 words')
plt.show()
```

```
C:\Users\Baki Akgun\New folder\Lib\site-packages\seaborn\_oldcore.py:1765: FutureWarning: unique with argument t
hat is not not a Series, Index, ExtensionArray, or np.ndarray is deprecated and will raise in a future version.
  order = pd.unique(vector)
```



In [11]:

```
#Vissualization with wordcloud

from wordcloud import WordCloud

username = 'Brilliant_Sock_2545'

# collect all user's comments and post as text
user = reddit.redditor(username)
posts = user.submissions.new(limit=None)
comments = user.comments.new(limit=None)

# Merge all collected text
all_texts = ''
```

```
for post in posts:
    all_texts += post.title + ' ' + post.selftext + ' '
for comment in comments:
    all_texts += comment.body + ' '

# Split and clean process
words = re.findall(r'\b\w+\b', all_texts.lower())
word_counts = Counter(words)

# create wordcloud
wordcloud = WordCloud(width=800, height=400, background_color='white').generate_from_frequencies(word_counts)

# Vissualizate wordcloud
plt.figure(figsize=(10, 5))
plt.imshow(wordcloud, interpolation='bilinear')
plt.axis('off')
plt.title(f'{username} Kullanıcısının Word Cloud')
plt.show()
```

In [ ]:

In [12]:
```
pip install wordcloud matplotlib numpy pillow
```

```
Requirement already satisfied: wordcloud in c:\users\baki akgun\new folder\lib\site-packages (1.9.3)
Requirement already satisfied: matplotlib in c:\users\baki akgun\appdata\roaming\python\python311\site-packages
(3.9.0)
Requirement already satisfied: numpy in c:\users\baki akgun\new folder\lib\site-packages (1.24.3)
Requirement already satisfied: pillow in c:\users\baki akgun\new folder\lib\site-packages (10.2.0)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\baki akgun\new folder\lib\site-packages (from matplo
tlib) (1.2.0)
Requirement already satisfied: cycler>=0.10 in c:\users\baki akgun\new folder\lib\site-packages (from matplotlib
) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\baki akgun\new folder\lib\site-packages (from matpl
otlib) (4.25.0)
Requirement already satisfied: kiwisolver>=1.3.1 in c:\users\baki akgun\new folder\lib\site-packages (from matpl
otlib) (1.4.4)
Requirement already satisfied: packaging>=20.0 in c:\users\baki akgun\appdata\roaming\python\python311\site-pack
ages (from matplotlib) (24.0)
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\baki akgun\new folder\lib\site-packages (from matplo
tlib) (3.0.9)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\baki akgun\appdata\roaming\python\python311\site
-packages (from matplotlib) (2.9.0.post0)
Requirement already satisfied: six>=1.5 in c:\users\baki akgun\appdata\roaming\python\python311\site-packages (f
rom python-dateutil>=2.7->matplotlib) (1.16.0)
Note: you may need to restart the kernel to use updated packages.
```

In [13]:
```
import numpy as np
from PIL import Image

username = 'Brilliant_Sock_2545'

user = reddit.redditor(username)
posts = user.submissions.new(limit=None)
comments = user.comments.new(limit=None)

all_texts = ''
for post in posts:
    all_texts += post.title + ' ' + post.selftext + ' '
```

```
for comment in comments:
    all_texts += comment.body + ' '

words = re.findall(r'\b\w+\b', all_texts.lower())
word_counts = Counter(words)

# add png file
mask_image_path = 'vbo-share.png'
mask_image = np.array(Image.open(mask_image_path))

# word cloud
wordcloud = WordCloud(width=800, height=800, background_color='white', mask=mask_image, contour_width=1, contou

# vissualite wordcloud
plt.figure(figsize=(10, 10))
plt.imshow(wordcloud, interpolation='bilinear')
plt.axis('off')
plt.title(f'{username} Kullanıcısının Word Cloud')
plt.show()
```


In [14]:
```
pip install textblob vaderSentiment
```

```
Requirement already satisfied: textblob in c:\users\baki akgun\new folder\lib\site-packages (0.18.0.post0)
Requirement already satisfied: vaderSentiment in c:\users\baki akgun\new folder\lib\site-packages (3.3.2)
Requirement already satisfied: nltk>=3.8 in c:\users\baki akgun\new folder\lib\site-packages (from textblob) (3.
8.1)
Requirement already satisfied: requests in c:\users\baki akgun\new folder\lib\site-packages (from vaderSentiment
) (2.31.0)
Requirement already satisfied: click in c:\users\baki akgun\new folder\lib\site-packages (from nltk>=3.8->textbl
ob) (8.1.7)
Requirement already satisfied: joblib in c:\users\baki akgun\new folder\lib\site-packages (from nltk>=3.8->textb
lob) (1.2.0)
Requirement already satisfied: regex>=2021.8.3 in c:\users\baki akgun\new folder\lib\site-packages (from nltk>=3
.8->textblob) (2023.10.3)
Requirement already satisfied: tqdm in c:\users\baki akgun\new folder\lib\site-packages (from nltk>=3.8->textblo
b) (4.65.0)
Requirement already satisfied: charset-normalizer<4,>=2 in c:\users\baki akgun\new folder\lib\site-packages (fro
m requests->vaderSentiment) (2.0.4)
Requirement already satisfied: idna<4,>=2.5 in c:\users\baki akgun\new folder\lib\site-packages (from requests->
vaderSentiment) (3.4)
Requirement already satisfied: urllib3<3,>=1.21.1 in c:\users\baki akgun\new folder\lib\site-packages (from requ
ests->vaderSentiment) (2.0.7)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\baki akgun\new folder\lib\site-packages (from requ
ests->vaderSentiment) (2024.2.2)
Requirement already satisfied: colorama in c:\users\baki akgun\appdata\roaming\python\python311\site-packages (f
rom click->nltk>=3.8->textblob) (0.4.6)
Note: you may need to restart the kernel to use updated packages.
```

In [16]:
```python
#EMOTİON ANALYZE

from vaderSentiment.vaderSentiment import SentimentIntensityAnalyzer
username = 'Unexpected'

#  collect user's all comment and post as text
user = reddit.redditor(username)
posts = user.submissions.new(limit=None)
comments = user.comments.new(limit=None)

# Emotion Analyze function
def analyze_sentiment_vader(text):
    analyzer = SentimentIntensityAnalyzer()
    scores = analyzer.polarity_scores(text)
    return scores['compound'], scores['pos'], scores['neu'], scores['neg']

# Analyze post and comments texts
all_texts = ''
for post in posts:
    all_texts += post.title + ' ' + post.selftext + ' '
for comment in comments:
    all_texts += comment.body + ' '

# Emotion analyze with Vader
compound, pos, neu, neg = analyze_sentiment_vader(all_texts)

# results
print(f'Genel Duygu (Compound): {compound}')
print(f'Pozitif Duygu: {pos}')
print(f'Nötr Duygu: {neu}')
print(f'Negatif Duygu: {neg}')

# Generally emotion
if compound >= 0.05:
    genel_duygu = 'Pozitif'
elif compound <= -0.05:
    genel_duygu = 'Negatif'
else:
    genel_duygu = 'Nötr'

print(f'Genel Duygu Yorumu: {genel_duygu}')
```

```
Genel Duygu (Compound): 1.0
Pozitif Duygu: 0.135
Nötr Duygu: 0.788
Negatif Duygu: 0.077
Genel Duygu Yorumu: Pozitif
```

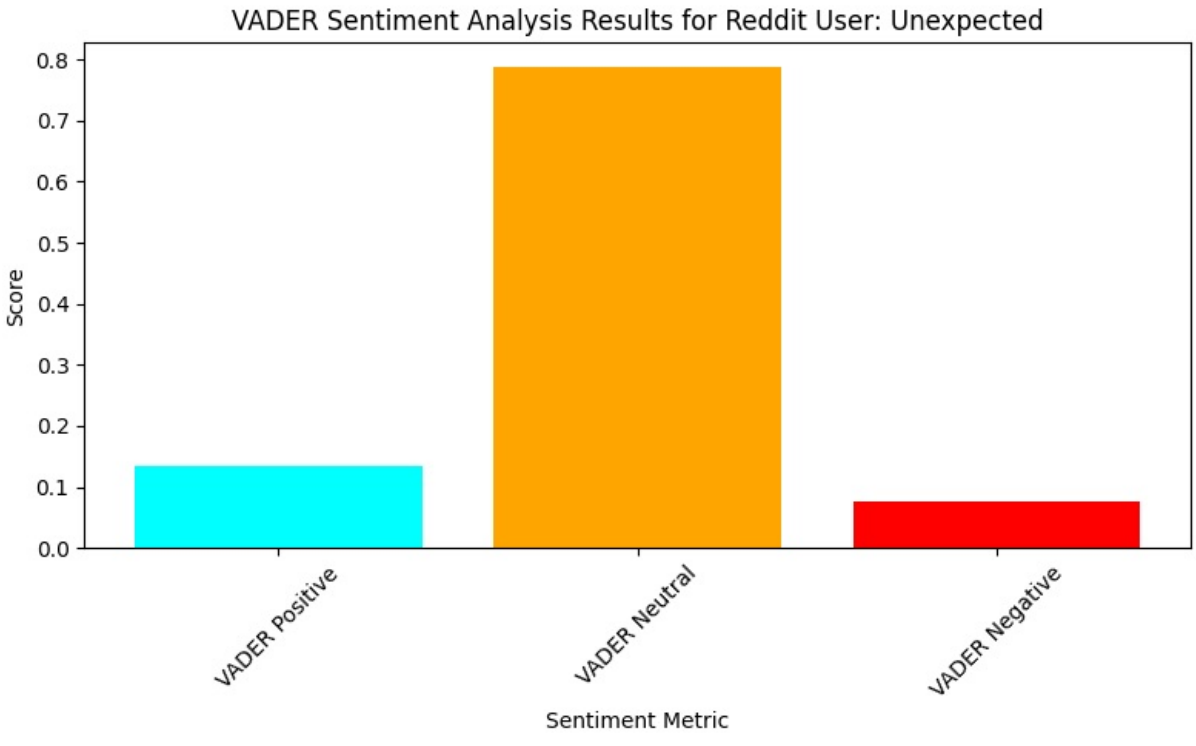
In [17]:
```python
#Particullarly emotion analyze

from textblob import TextBlob



username = 'Unexpected'

user = reddit.redditor(username)
posts = user.submissions.new(limit=None)
```

```
comments = user.comments.new(limit=None)

# emotion analyze dunction
def analyze_sentiment_textblob(text):
    analysis = TextBlob(text)
    return analysis.sentiment.polarity, analysis.sentiment.subjectivity

def analyze_sentiment_vader(text):
    analyzer = SentimentIntensityAnalyzer()
    scores = analyzer.polarity_scores(text)
    return scores['compound'], scores['pos'], scores['neu'], scores['neg']

# analyze text from comments and posts
all_texts = ''
for post in posts:
    all_texts += post.title + ' ' + post.selftext + ' '
for comment in comments:
    all_texts += comment.body + ' '

# emotion analyze with textblob
polarity, subjectivity = analyze_sentiment_textblob(all_texts)
print(f'TextBlob Polarity: {polarity}, Subjectivity: {subjectivity}')

# emotion analyze with vader
compound, pos, neu, neg = analyze_sentiment_vader(all_texts)
print(f'VADER Compound: {compound}, Positive: {pos}, Neutral: {neu}, Negative: {neg}')
```

```
TextBlob Polarity: 0.11961980872700215, Subjectivity: 0.48322713833184644
VADER Compound: 1.0, Positive: 0.135, Neutral: 0.788, Negative: 0.077
```

In [22]:

```
import matplotlib.pyplot as plt

# Kodunuzdan aldığınız VADER duygu analizi sonuçları
vader_compound = compound
vader_pos = pos
vader_neu = neu
vader_neg = neg

# Duygu analizi sonuçlarını görselleştirme
labels = [ 'VADER Positive', 'VADER Neutral', 'VADER Negative']
values = [ vader_pos, vader_neu, vader_neg]

plt.figure(figsize=(8, 5))
plt.bar(labels, values, color=[ 'cyan', 'orange', 'red'])
plt.title(f'VADER Sentiment Analysis Results for Reddit User: {username}')
plt.xlabel('Sentiment Metric')
plt.ylabel('Score')
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()
```

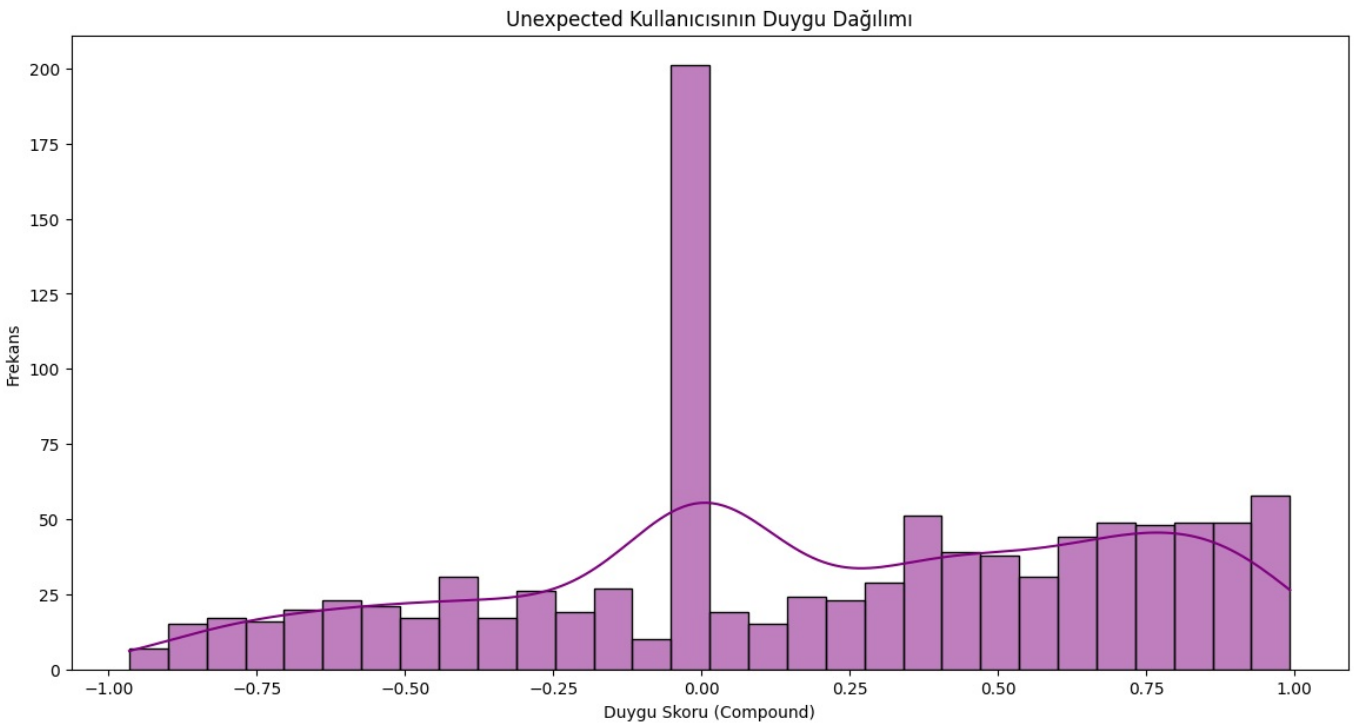


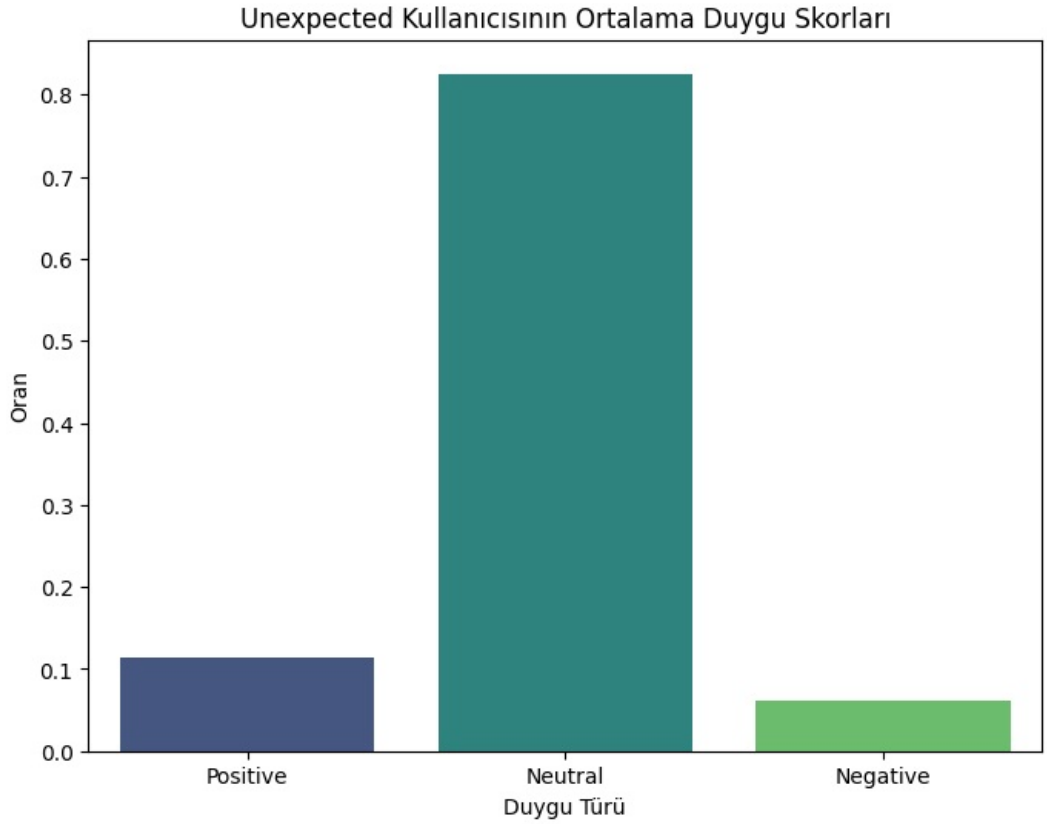
In [20]:

```
#Visual emotion results

import pandas as pd
```

```
username = 'Unexpected'

user = reddit.redditor(username)
posts = user.submissions.new(limit=None)
comments = user.comments.new(limit=None)

# function for emotion analyze
def analyze_sentiment_vader(text):
    analyzer = SentimentIntensityAnalyzer()
    scores = analyzer.polarity_scores(text)
    return scores

# Analyze text from posts and comments and collect
results = []
for post in posts:
    sentiment_scores = analyze_sentiment_vader(post.title + ' ' + post.selftext)
    results.append({
        'Type': 'Post',
        'Content': post.title + ' ' + post.selftext,
        'Compound': sentiment_scores['compound'],
        'Positive': sentiment_scores['pos'],
        'Neutral': sentiment_scores['neu'],
        'Negative': sentiment_scores['neg']
    })

for comment in comments:
    sentiment_scores = analyze_sentiment_vader(comment.body)
    results.append({
        'Type': 'Comment',
        'Content': comment.body,
        'Compound': sentiment_scores['compound'],
        'Positive': sentiment_scores['pos'],
        'Neutral': sentiment_scores['neu'],
        'Negative': sentiment_scores['neg']
    })

# convert reults to Dataframe
df = pd.DataFrame(results)

# Vissualite
plt.figure(figsize=(14, 7))
sns.histplot(df, x='Compound', bins=30, kde=True, color='purple')
plt.title(f'{username} Kullanıcısının Duygu Dağılımı')
plt.xlabel('Duygu Skoru (Compound)')
plt.ylabel('Frekans')
plt.show()

# Emotion score(positive, negative, neutral)
df_mean = df[['Positive', 'Neutral', 'Negative']].mean().reset_index()
df_mean.columns = ['Duygu', 'Oran']

plt.figure(figsize=(8, 6))
sns.barplot(x='Duygu', y='Oran', data=df_mean, palette='viridis')
plt.title(f'{username} Kullanıcısının Ortalama Duygu Skorları')
plt.xlabel('Duygu Türü')
plt.ylabel('Oran')
plt.show()
```

```
C:\Users\Baki Akgun\New folder\Lib\site-packages\seaborn\_oldcore.py:1119: FutureWarning: use_inf_as_na option i
s deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.
  with pd.option_context('mode.use_inf_as_na', True):
```


Unexpected Kullanıcısının Duygu Dağılımı
Frekans
Duygu Skoru (Compound)
0
25
50
75
100
125
150
175
200
−1.00
−0.75
−0.50
−0.25
0.00
0.25
0.50
0.75
1.00


Unexpected Kullanıcısının Ortalama Duygu Skorları
Oran
Duygu Türü
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
Positive
Neutral
Negative

In [ ]:

Loading [MathJax]/jax/output/CommonHTML/fonts/TeX/fontdata.js