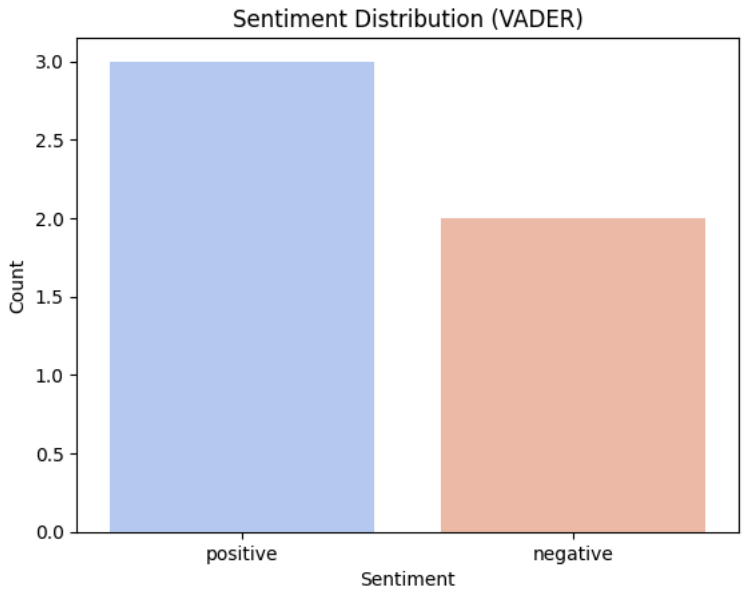
```
# 1. Imports
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from nltk.sentiment import SentimentIntensityAnalyzer
from textblob import TextBlob
import nltk
nltk.download('vader_lexicon')

# 2. Sample Dataset
data = {
    "review": [
        "This product is fantastic! Highly recommended.",
        "Terrible experience. Waste of money.",
        "It's okay, not great but not bad either.",
        "Absolutely love it! Five stars.",
        "Do not buy this. It broke on the first use."
    ]
}
df = pd.DataFrame(data)

# 3. VADER Sentiment Analysis
sia = SentimentIntensityAnalyzer()
df['vader_score'] = df['review'].apply(lambda x: sia.polarity_scores(x)['compound'])
df['vader_sentiment'] = df['vader_score'].apply(
    lambda x: 'positive' if x >= 0.05 else 'negative' if x <= -0.05 else 'neutral'
)

# 4. TextBlob Polarity (Optional for comparison)
df['textblob_polarity'] = df['review'].apply(lambda x: TextBlob(x).sentiment.polarity)
df['textblob_sentiment'] = df['textblob_polarity'].apply(
    lambda x: 'positive' if x > 0 else 'negative' if x < 0 else 'neutral'
)

# 5. Insights Summary
print("VADER Sentiment Counts:")
print(df['vader_sentiment'].value_counts())

# 6. Visualization
sns.countplot(data=df, x='vader_sentiment', palette='coolwarm')
plt.title('Sentiment Distribution (VADER)')
plt.xlabel('Sentiment')
plt.ylabel('Count')
plt.show()

# 7. Output Table
df[['review', 'vader_score', 'vader_sentiment', 'textblob_polarity', 'textblob_sentiment']]
```

```
[nltk_data] Downloading package vader_lexicon to /root/nltk_data...
VADER Sentiment Counts:
vader_sentiment
positive    3
negative    2
Name: count, dtype: int64
<ipython-input-3-f8c3f0f24199>:40: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and set `le

  sns.countplot(data=df, x='vader_sentiment', palette='coolwarm')
```



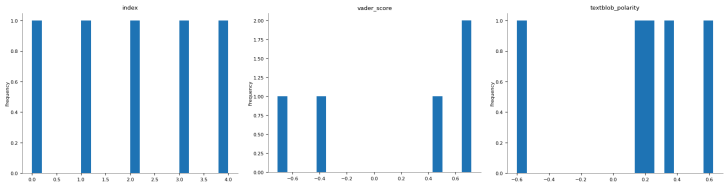
1 to 5 of 5 entries Filter

index	review	vader_score	vader_sentiment	textblob_polarity	textblob_sentiment
0	This product is fantastic! Highly recommended.	0.7171	positive	0.33	positive
1	Terrible experience. Waste of money.	-0.7096	negative	-0.6	negative
2	It's okay, not great but not bad either.	0.4728	positive	0.14999999999999997	positive
3	Absolutely love it! Five stars.	0.6989	positive	0.625	positive
4	Do not buy this. It broke on the first use.	-0.4215	negative	0.25	positive

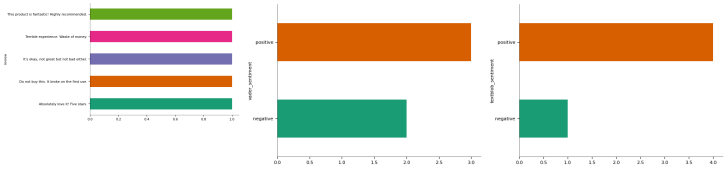
Show 50 per page

Like what you see? Visit the data table notebook to learn more about interactive tables.

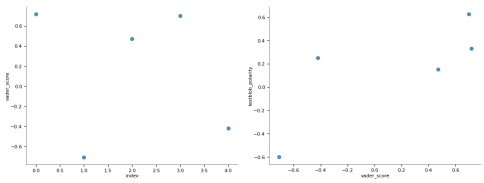
Distributions



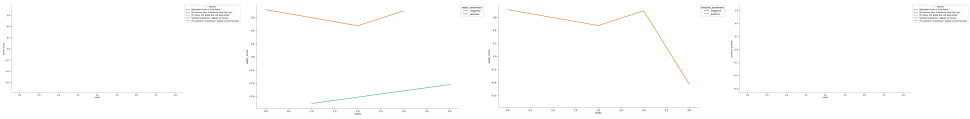
Categorical distributions



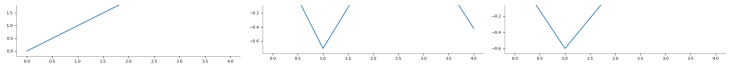
2-d distributions



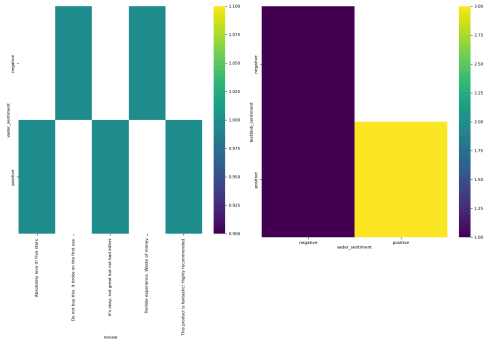
Time series



Values



2-d categorical distributions



Faceted distributions

<string>:5: FutureWarning:

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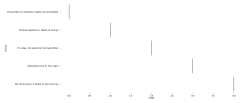
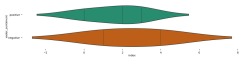


<string>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `y` variable to `hue` and set `le



<string>:5: FutureWarning: