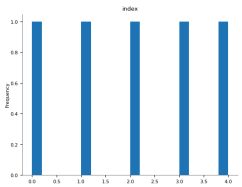
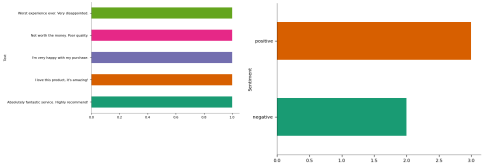
```
import pandas as pd

data = {
    'Text': [
        "I love this product, it's amazing!",
        "Worst experience ever. Very disappointed.",
        "Absolutely fantastic service. Highly recommend!",
        "Not worth the money. Poor quality.",
        "I'm very happy with my purchase.",
        "Terrible! Would not buy again.",
        "Great value for the price!",
        "Awful customer service.",
        "Very satisfied with the results.",
        "It's okay, not the best but decent."
    ],
    'Sentiment': [
        'positive',
        'negative',
        'positive',
        'negative',
        'positive',
        'negative',
        'positive',
        'negative',
        'positive',
        'neutral'
    ]
}

df = pd.DataFrame(data)
df.to_csv("sentiment_data.csv", index=False)

df.head()
```

	Text	Sentiment
0	I love this product, it's amazing!	positive
1	Worst experience ever. Very disappointed.	negative
2	Absolutely fantastic service. Highly recommend!	positive
3	Not worth the money. Poor quality.	negative
4	I'm very happy with my purchase.	positive

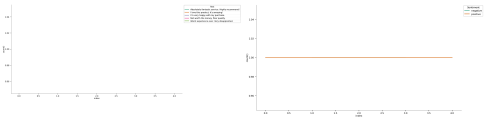
Distributions



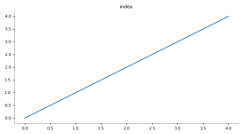
Categorical distributions



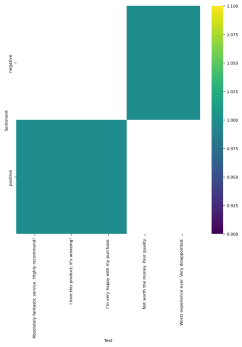
Time series



Values

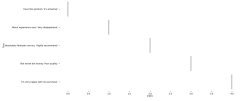


2-d categorical distributions

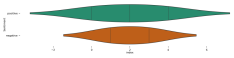


Faceted distributions

```
<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 `
```



```
<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 `
```



```
!pip install nltk scikit-learn
```

```
Requirement already satisfied: nltk in /usr/local/lib/python3.11/dist-packages (3.9.1)
Requirement already satisfied: scikit-learn in /usr/local/lib/python3.11/dist-packages (1.6.1)
Requirement already satisfied: click in /usr/local/lib/python3.11/dist-packages (from nltk) (8.2.1)
Requirement already satisfied: joblib in /usr/local/lib/python3.11/dist-packages (from nltk) (1.5.1)
Requirement already satisfied: regex>=2021.8.3 in /usr/local/lib/python3.11/dist-packages (from nltk) (2024.11.6)
Requirement already satisfied: tqdm in /usr/local/lib/python3.11/dist-packages (from nltk) (4.67.1)
Requirement already satisfied: numpy>=1.19.5 in /usr/local/lib/python3.11/dist-packages (from scikit-learn) (2.0.2)
Requirement already satisfied: scipy>=1.6.0 in /usr/local/lib/python3.11/dist-packages (from scikit-learn) (1.16.1)
Requirement already satisfied: threadpoolctl>=3.1.0 in /usr/local/lib/python3.11/dist-packages (from scikit-learn) (3.6.0)
```

```
import pandas as pd
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.model_selection import train_test_split
from sklearn.naive_bayes import MultinomialNB
from sklearn.metrics import classification_report

df = pd.read_csv("sentiment_data.csv")

vectorizer = CountVectorizer()
X = vectorizer.fit_transform(df['Text'])
y = df['Sentiment']

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)


model = MultinomialNB()
model.fit(X_train, y_train)
y_pred = model.predict(X_test)

print("Classification Report:\n")
print(classification_report(y_test, y_pred))
```

```
Classification Report:

                  precision    recall  f1-score   support

         negative       0.00      0.00      0.00         1
```