

Sentiment Analysis

June 23, 2025

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[8]: #NER + Rule-Based Sentiment with spaCy

import spacy
from textblob import TextBlob

[3]: # Load English spaCy model
nlp = spacy.load("en_core_web_sm")

[4]: #Sample Amazon product reviews
reviews = [
    "The Apple iPhone 13 has amazing camera quality. Totally worth the price!",
    "Samsung Galaxy S22 is overpriced and underperforms for the specs.",
    "I love the new Sony headphones. Crystal clear sound!",
    "Terrible experience with Lenovo laptops. Won't recommend.",
]

[9]: # Process each review
for review in reviews:
    print("\nReview:", review)
    doc = nlp(review)

    # Extract Named Entities (e.g., product, brand)
    print("Named Entities:")
    for ent in doc.ents:
        print(f" - {ent.text} ({ent.label_})")

    # Rule-Based Sentiment using TextBlob
    blob = TextBlob(review)
    sentiment = "Positive" if blob.sentiment.polarity > 0 else "Negative" if
    ↪blob.sentiment.polarity < 0 else "Neutral"
    print("Sentiment:", sentiment)
```

Review: The Apple iPhone 13 has amazing camera quality. Totally worth the price!
Named Entities:
- Apple (ORG)
Sentiment: Positive

Review: Samsung Galaxy S22 is overpriced and underperforms for the specs.

Named Entities:

- Samsung Galaxy S22 (ORG)

Sentiment: Neutral

Review: I love the new Sony headphones. Crystal clear sound!

Named Entities:

- Sony (ORG)

Sentiment: Positive

Review: Terrible experience with Lenovo laptops. Won't recommend.

Named Entities:

- Lenovo (ORG)

Sentiment: Negative