SUPERIOR UNIVERSITY

Programming For Artificial Intelligence (Lab)

Assignment - 9

Name:

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Department:

Software Engineering Department.

Program:

Artificial Intelligence.

Section:

BSAI-4A

Question # 1:

Submit any task from the given subtasks within the Section: Natural Language Processing Tasks

Python:

```
import nltk

# nltk.download('vader_lexicon')

from nltk.sentiment import SentimentIntensityAnalyzer

analyzer=SentimentIntensityAnalyzer()

sentences=["The customer service was excellent.","I hate how slow and buggy this app is.","The weather today is okay.","The product works fine, but it's overpriced.","Oh perfect, the bus left without me. Fantastic."]

for i in sentences:
    score=analyzer.polarity_scores(i)
    print(f"Sentence: {i}")
    print("Sentiment Score:",score)
    print(f"\n")
```

Output:

```
Sentence: The customer service was excellent.
Sentiment Score: {'neg': 0.0, 'neu': 0.519, 'pos': 0.481, 'compound': 0.5719}


Sentence: I hate how slow and buggy this app is.
Sentiment Score: {'neg': 0.346, 'neu': 0.654, 'pos': 0.0, 'compound': -0.5719}


Sentence: The weather today is okay.
Sentiment Score: {'neg': 0.0, 'neu': 0.678, 'pos': 0.322, 'compound': 0.2263}


Sentence: The product works fine, but it's overpriced.
Sentiment Score: {'neg': 0.0, 'neu': 0.811, 'pos': 0.189, 'compound': 0.1027}


Sentence: Oh perfect, the bus left without me. Fantastic.
Sentiment Score: {'neg': 0.232, 'neu': 0.475, 'pos': 0.293, 'compound': 0.1965}
```

Documentation:

Sentiment Analysis is the process of identifying whether a piece of text expresses positive, negative, or neutral emotion. VADER (Valence Aware Dictionary and sEntiment Reasoner) is a rule-based sentiment analysis tool available in NLTK. This task demonstrates basic sentiment analysis using the VADER model from NLTK. It is simple, fast, and does not require training a machine learning model.

VADER outputs four scores:

- **pos** => Positive
- **neu** => Neutral
- **neg** => Negative
- **compound** => Overall final sentiment