Fuzzy_Systems_IMDB

April 27, 2021

1 Computational Intelligence Project: Sentiment Analysis on IMDB dataset Using Fuzzy System

Sentiment analysis is one of the key areas of research in NLP and Sequence modelling. I will be using fuzzy systems to predict two classes - positive or negative sentiment.

```python
import re
import os
import time
import pandas as pd
import numpy as np
!pip install -U scikit-fuzzy
import skfuzzy as fuzz
import nltk
nltk.download('vader_lexicon')
from keras.datasets import imdb
import matplotlib.pyplot as plt
from nltk.sentiment.vader import SentimentIntensityAnalyzer
```

```
Requirement already up-to-date: scikit-fuzzy in /usr/local/lib/python3.7/dist-
packages (0.4.2)
Requirement already satisfied, skipping upgrade: networkx>=1.9.0 in
/usr/local/lib/python3.7/dist-packages (from scikit-fuzzy) (2.5)
Requirement already satisfied, skipping upgrade: numpy>=1.6.0 in
/usr/local/lib/python3.7/dist-packages (from scikit-fuzzy) (1.19.5)
Requirement already satisfied, skipping upgrade: scipy>=0.9.0 in
/usr/local/lib/python3.7/dist-packages (from scikit-fuzzy) (1.4.1)
Requirement already satisfied, skipping upgrade: decorator>=4.3.0 in
/usr/local/lib/python3.7/dist-packages (from networkx>=1.9.0->scikit-fuzzy)
(4.4.2)
[nltk_data] Downloading package vader_lexicon to /root/nltk_data...
[nltk_data]   Package vader_lexicon is already up-to-date!

/usr/local/lib/python3.7/dist-packages/nltk/twitter/__init__.py:20: UserWarning:
The twython library has not been installed. Some functionality from the twitter
package will not be available.
  warnings.warn("The twython library has not been installed. "
```

1.0.1 Step 1| Loading IMDB Dataset

```python
from google.colab import drive
drive.mount('/content/drive')

dataset = "IMDB Dataset.csv"
drive_path = '/content/drive/My Drive/Computational Intelligence/'
path = os.path.join(drive_path, dataset)
df = pd.read_csv(path)
```

Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).

```python
start = time.time()

X_train = df
doc = X_train.review
print(len(doc))
senti_doc = X_train.sentiment
```

50000

```python
df.head
```

```
<bound method NDFrame.head of
review sentiment
0       One of the other reviewers has mentioned that ...  positive
1       A wonderful little production. <br /><br />The...  positive
2       I thought this was a wonderful way to spend ti...  positive
3       Basically there's a family where a little boy ...  negative
4       Petter Mattei's "Love in the Time of Money" is...  positive
...                                                   ...       ...
49995  I thought this movie did a down right good job...  positive
49996  Bad plot, bad dialogue, bad acting, idiotic di...  negative
49997  I am a Catholic taught in parochial elementary...  negative
49998  I'm going to have to disagree with the previou...  negative
49999  No one expects the Star Trek movies to be high...  negative

[50000 rows x 2 columns]>
```

```python
# Generate variables
x_p = np.arange(0, 1, 0.1)
x_n = np.arange(0, 1, 0.1)
x_op = np.arange(0, 10, 1)
```

1.1 Membership Functions

```
# Generate fuzzy membership functions
p_lo = fuzz.trimf(x_p, [0, 0, 0.5])
p_md = fuzz.trimf(x_p, [0, 0.5, 1])
p_hi = fuzz.trimf(x_p, [0.5, 1, 1])
n_lo = fuzz.trimf(x_n, [0, 0, 0.5])
n_md = fuzz.trimf(x_n, [0, 0.5, 1])
n_hi = fuzz.trimf(x_n, [0.5, 1, 1])
op_Neg = fuzz.trimf(x_op, [0, 0, 5])
op_Neu = fuzz.trimf(x_op, [0, 5, 10])
op_Pos = fuzz.trimf(x_op, [5, 10, 10])
```
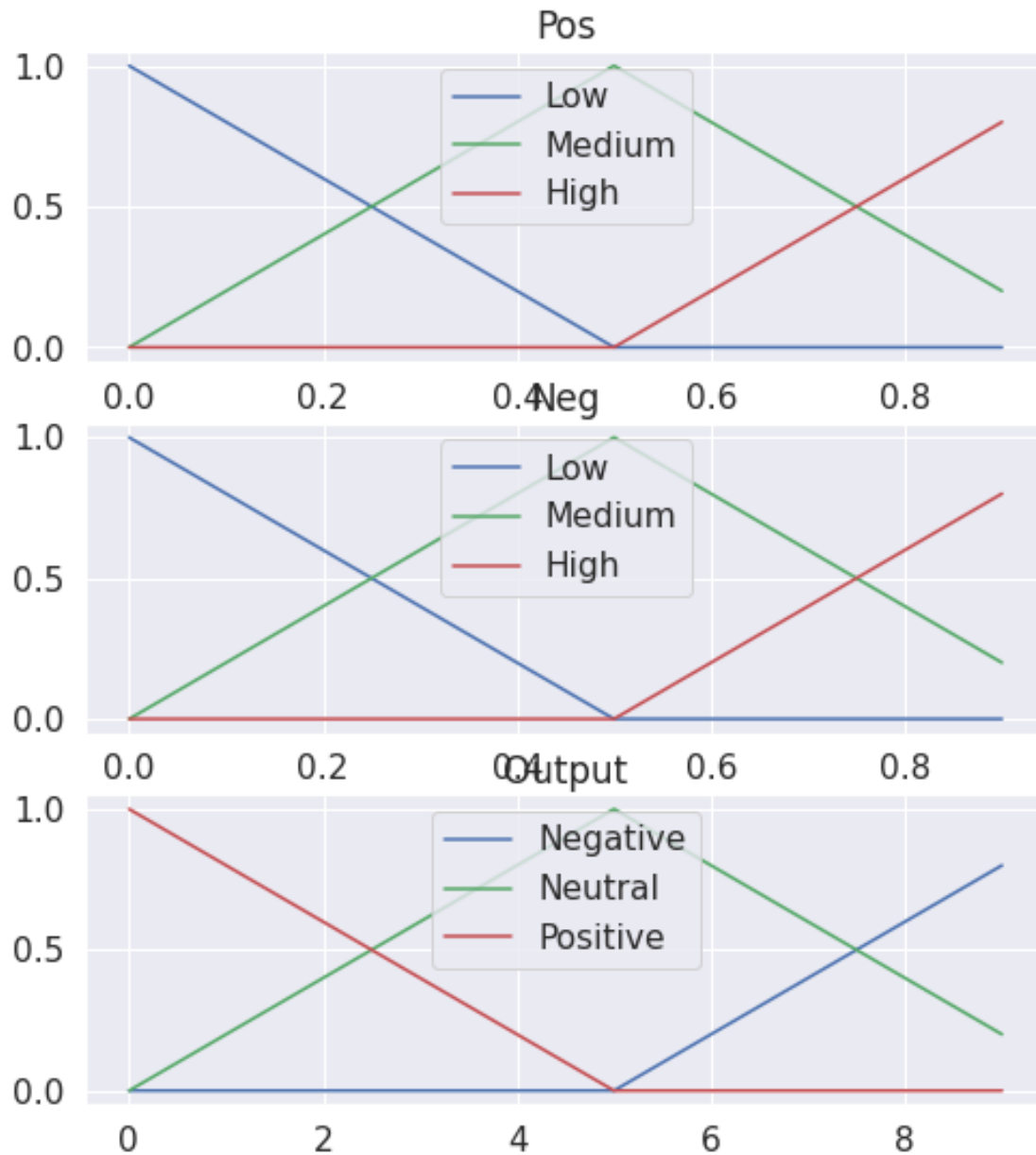
1.1.1 Visualization of Memvership Functions

```
# Visualize membership functions
fig, (ax0, ax1, ax2) = plt.subplots(nrows=3, figsize=(8, 9))
#
ax0.plot(x_p, p_lo, 'b', linewidth=1.5, label='Low')
ax0.plot(x_p, p_md, 'g', linewidth=1.5, label='Medium')
ax0.plot(x_p, p_hi, 'r', linewidth=1.5, label='High')
ax0.set_title('Pos')
ax0.legend()

ax1.plot(x_n, n_lo, 'b', linewidth=1.5, label='Low')
ax1.plot(x_n, n_md, 'g', linewidth=1.5, label='Medium')
ax1.plot(x_n, n_hi, 'r', linewidth=1.5, label='High')
ax1.set_title('Neg')
ax1.legend()

ax2.plot(x_op, op_Pos, 'b', linewidth=1.5, label='Negative')
ax2.plot(x_op, op_Neu, 'g', linewidth=1.5, label='Neutral')
ax2.plot(x_op, op_Neg, 'r', linewidth=1.5, label='Positive')
ax2.set_title('Output')
ax2.legend()
```

```
<matplotlib.legend.Legend at 0x7f0521db8950>
```

[ ]:

1.2 Preprocessing

```
contractions = {
"ain't": "am not / are not", "aren't": "are not / am not","can't":␣
 ↪"cannot","can't've": "cannot have","'cause": "because",
"could've": "could have","couldn't": "could not","couldn't've": "could not␣
 ↪have","didn't": "did not","doesn't": "does not",
```

```
"don't": "do not","hadn't": "had not","hadn't've": "had not have","hasn't":␣
 ↪"has not","haven't": "have not",
"he'd": "he had / he would","he'd've": "he would have","he'll": "he shall / he␣
 ↪will",
"he'll've": "he shall have / he will have","he's": "he has / he is","how'd":␣
 ↪"how did","how'd'y": "how do you",
"how'll": "how will","how's": "how has / how is","i'd": "I had / I␣
 ↪would","i'd've": "I would have","i'll": "I shall / I will",
"i'll've": "I shall have / I will have","i'm": "I am","i've": "I have","isn't":␣
 ↪"is not","it'd": "it had / it would",
"it'd've": "it would have","it'll": "it shall / it will","it'll've": "it shall␣
 ↪have / it will have","it's": "it has / it is",
"let's": "let us","ma'am": "madam","mayn't": "may not",
"might've": "might have","mightn't": "might not","mightn't've": "might not␣
 ↪have","must've": "must have","mustn't": "must not",
"mustn't've": "must not have","needn't": "need not","needn't've": "need not␣
 ↪have","o'clock": "of the clock",
"oughtn't": "ought not","oughtn't've": "ought not have","shan't": "shall␣
 ↪not","sha'n't": "shall not",
"shan't've": "shall not have","she'd": "she had / she would","she'd've": "she␣
 ↪would have","she'll": "she shall / she will",
"she'll've": "she shall have / she will have","she's": "she has / she␣
 ↪is","should've": "should have","shouldn't": "should not",
"shouldn't've": "should not have","so've": "so have","so's": "so as / so␣
 ↪is","that'd": "that would / that had",
"that'd've": "that would have","that's": "that has / that is","there'd": "there␣
 ↪had / there would",
"there'd've": "there would have","there's": "there has / there is","they'd":␣
 ↪"they had / they would",
"they'd've": "they would have","they'll": "they shall / they will","they'll've":
 ↪ "they shall have / they will have",
"they're": "they are","they've": "they have","to've": "to have","wasn't": "was␣
 ↪not","we'd": "we had / we would",
"we'd've": "we would have","we'll": "we will","we'll've": "we will␣
 ↪have","we're": "we are","we've": "we have",
"weren't": "were not","what'll": "what shall / what will","what'll've": "what␣
 ↪shall have / what will have",
"what're": "what are","what's": "what has / what is","what've": "what␣
 ↪have","when's": "when has / when is",
"when've": "when have","where'd": "where did","where's": "where has / where␣
 ↪is","where've": "where have","who'll": "who shall / who will",
"who'll've": "who shall have / who will have","who's": "who has / who␣
 ↪is","who've": "who have","why's": "why has / why is",
"why've": "why have","will've": "will have","won't": "will not","won't've":␣
 ↪"will not have","would've": "would have",
```

```
"wouldn't": "would not","wouldn't've": "would not have","y'all": "you␣
 ↪all","y'all'd": "you all would",
"y'all'd've": "you all would have","y'all're": "you all are","y'all've": "you␣
 ↪all have","you'd": "you had / you would",
"you'd've": "you would have","you'll": "you shall / you will","you'll've": "you␣
 ↪shall have / you will have",
"you're": "you are","you've": "you have"
}
```

```python
def identify_contractions(dataframe):
    for i in range(0, len(dataframe)):
        for word in dataframe[i].split():
            if word.lower() in contractions:
                dataframe[i] = dataframe[i].replace(word, contractions[word.
 ↪lower()])
    return dataframe
```

```python
X_train['review'] = identify_contractions(X_train['review'])
```

```python
tweets=[]
senti=[]
sentiment=[]
sentiment_doc=[]

for j in range(len(doc)):
    str1=X_train.review[j]
    str2=str1.lower()
    tweets.append(str2)     # converted into lower case
    senti.append(X_train.sentiment[j])

def decontracted(phrase):    # text pre-processing
        # specific
        phrase = re.sub(r"won't", "will not", phrase)
        phrase = re.sub(r"can\'t", "can not", phrase)
        phrase = re.sub(r"@", "" , phrase)           # removal of @
        phrase =  re.sub(r"http\S+", "", phrase)    # removal of URLs
        phrase = re.sub(r"#", "", phrase)           # hashtag processing

        # general
        phrase = re.sub(r"n\'t", " not", phrase)
        phrase = re.sub(r"\'re", " are", phrase)
        phrase = re.sub(r"\'s", " is", phrase)
        phrase = re.sub(r"\'d", " would", phrase)
        phrase = re.sub(r"\'ll", " will", phrase)
        phrase = re.sub(r"\'t", " not", phrase)
        phrase = re.sub(r"\'ve", " have", phrase)
        phrase = re.sub(r"\'m", " am", phrase)
        return phrase
```

```
for k in range(len(doc)):
    tweets[k]=decontracted(tweets[k])

sid = SentimentIntensityAnalyzer()
```

[ ]:

1.3 Output of Fuzzy System

```
for j in range(len(doc)):
    sentiment_doc.append(senti[j])
    ss = sid.polarity_scores(tweets[j])
    posscore=ss['pos']
    negscore=ss['neg']
    neuscore=ss['neu']
    compoundscore=ss['compound']

    # print(str(j+1)+" {:-<65} {}".format(tweets[j], str(ss)))
    print("Review: ", j)

    print("\nPositive Score for each  review :")
    if (posscore==1):
        posscore=0.9
    else:
        posscore=round(posscore,1)
    print(posscore)

    print("\nNegative Score for each  review :")
    if (negscore==1):
        negscore=0.9
    else:
        negscore=round(negscore,1)
    print(negscore)

    # We need the activation of our fuzzy membership functions at these values.
    p_level_lo = fuzz.interp_membership(x_p, p_lo, posscore)
    p_level_md = fuzz.interp_membership(x_p, p_md, posscore)
    p_level_hi = fuzz.interp_membership(x_p, p_hi, posscore)

    n_level_lo = fuzz.interp_membership(x_n, n_lo, negscore)
    n_level_md = fuzz.interp_membership(x_n, n_md, negscore)
    n_level_hi = fuzz.interp_membership(x_n, n_hi, negscore)

    # Now we take our rules and apply them. Rule 1 concerns bad OR nice.
    # The OR operator means we take the maximum of these two.
    active_rule1 = np.fmin(p_level_lo, n_level_lo)
```

```python
active_rule2 = np.fmin(p_level_md, n_level_lo)
active_rule3 = np.fmin(p_level_hi, n_level_lo)
active_rule4 = np.fmin(p_level_lo, n_level_md)
active_rule5 = np.fmin(p_level_md, n_level_md)
active_rule6 = np.fmin(p_level_hi, n_level_md)
active_rule7 = np.fmin(p_level_lo, n_level_hi)
active_rule8 = np.fmin(p_level_md, n_level_hi)
active_rule9 = np.fmin(p_level_hi, n_level_hi)

# Now we apply this by clipping the top off the corresponding output
# membership function with `np.fmin`

n1=np.fmax(active_rule4,active_rule7)
n2=np.fmax(n1,active_rule8)
op_activation_lo = np.fmin(n2,op_Neg)

neu1=np.fmax(active_rule1,active_rule5)
neu2=np.fmax(neu1,active_rule9)
op_activation_md = np.fmin(neu2,op_Neu)

p1=np.fmax(active_rule2,active_rule3)
p2=np.fmax(p1,active_rule6)
op_activation_hi = np.fmin(p2,op_Pos)

op0 = np.zeros_like(x_op)

# Aggregate all three output membership functions together
aggregated = np.fmax(op_activation_lo,
                     np.fmax(op_activation_md, op_activation_hi))

# Calculate defuzzified result
op = fuzz.defuzz(x_op, aggregated, 'centroid')
output=round(op,2)

op_activation = fuzz.interp_membership(x_op, aggregated, op)  # for plot

print("\nFiring Strength of Negative (wneg): "+str(round(n2,4)))
print("Firing Strength of Neutral (wneu): "+str(round(neu2,4)))
print("Firing Strength of Positive (wpos): "+str(round(p2,4)))

print("\nResultant consequents MFs:" )
print("op_activation_low: "+str(op_activation_lo))
print("op_activation_med: "+str(op_activation_md))
print("op_activation_high: "+str(op_activation_hi))

print("\nAggregated Output: "+str(aggregated))
print("\nDefuzzified Output: "+str(output))
```

```python
# Scale : Neg Pos
  if 0<(output)<4.99:     # R
      print("\nOutput after Defuzzification: Negative")
      sentiment.append("Negative")

  elif 5<(output)<10:
      print("\nOutput after Defuzzification: Positive")
      sentiment.append("Positive")

  print("Doc sentiment: " +str(senti[j])+"\n")
```

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49792

Positive Score for each review :
0.1

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49793

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49794


Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49795
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49796


Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49797
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49798

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49799

```
Positive Score for each review :
0.2

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49800

Positive Score for each review :
0.1

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49801
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49802


Positive Score for each  review :
0.2

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.61

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49803
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49804


Positive Score for each  review :
0.3

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.2 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.12

Output after Defuzzification: Positive
Doc sentiment: positive


Review:  49805
```

```
Positive Score for each  review :
0.0

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49806


Positive Score for each  review :
0.4

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.2
Firing Strength of Positive (wpos): 0.8

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.8]

Aggregated Output: [0.  0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.6 0.8]

Defuzzified Output: 5.87

Output after Defuzzification: Positive
Doc sentiment: positive


Review:  49807
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49808

Positive Score for each  review :
0.1

Negative Score for each  review :
0.3

Firing Strength of Negative (wneg): 0.6
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.6 0.6 0.6 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.6 0.6 0.6 0.4 0.4 0.4 0.4 0.4 0.4 0.2]

Defuzzified Output: 3.99

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49809
```

Positive Score for each review :
0.2

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49810

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49811

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49812


Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49813
```

Positive Score for each review :
0.1

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49814

Positive Score for each review :
0.0

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49815

```
Positive Score for each  review :
0.1


Negative Score for each  review :
0.1


Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2


Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]


Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]


Defuzzified Output: 4.81


Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49816


Positive Score for each  review :
0.1


Negative Score for each  review :
0.0


Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2


Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]


Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]


Defuzzified Output: 4.91


Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49817
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49818


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49819
```

```
Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: negative


Review:  49820


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49821
```

Positive Score for each review :
0.0

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49822

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49823

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49824

Positive Score for each  review :
0.0

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49825
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49826


Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49827
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49828


Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49829
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49830

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49831
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49832


Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49833
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49834

Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49835
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49836

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49837
```

Positive Score for each review :
0.1

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49838

Positive Score for each review :
0.2

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49839

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49840

Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49841
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49842

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49843
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low:  [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med:  [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49844


Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low:  [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med:  [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49845
```

```
Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive


Review:  49846

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49847
```

Positive Score for each review :
0.2

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49848

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49849

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49850

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49851
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49852


Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive


Review:  49853
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49854


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49855
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49856


Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49857
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49858

Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49859
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49860


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49861
```

43

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49862


Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49863
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49864

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49865

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49866


Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49867
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49868

Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49869
```

Positive Score for each review :
0.1

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49870

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49871

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49872


Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49873
```

```
Positive Score for each  review :
0.4

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.2
Firing Strength of Positive (wpos): 0.8

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.8]

Aggregated Output: [0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.6 0.8]

Defuzzified Output: 5.67

Output after Defuzzification: Positive
Doc sentiment: positive


Review:  49874


Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49875
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49876


Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49877
```

```
Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: negative

Review:  49878

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49879
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49880

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49881
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49882


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49883
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49884

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49885
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49886


Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49887
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49888


Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49889
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49890

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49891
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49892

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49893

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49894

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49895
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49896


Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49897
```

Positive Score for each review :
0.1

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49898

Positive Score for each review :
0.2

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49899

Positive Score for each review :
0.0

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49900

Positive Score for each review :
0.2

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49901

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49902

Positive Score for each  review :
0.1

Negative Score for each  review :
0.3

Firing Strength of Negative (wneg): 0.6
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.6 0.6 0.6 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.6 0.6 0.6 0.4 0.4 0.4 0.4 0.4 0.4 0.2]

Defuzzified Output: 3.99

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49903
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49904

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49905
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49906

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49907
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49908

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49909

Positive Score for each review :
0.4

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.2
Firing Strength of Positive (wpos): 0.8

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.6 0.8]

Aggregated Output: [0. 0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.6 0.8]

Defuzzified Output: 5.87

Output after Defuzzification: Positive
Doc sentiment: positive

Review: 49910

Positive Score for each review :
0.3

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.6 0.6]

Aggregated Output: [0. 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive

Review: 49911

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49912

Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49913
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49914

Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49915
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49916


Positive Score for each  review :
0.1

Negative Score for each  review :
0.3

Firing Strength of Negative (wneg): 0.6
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.6 0.6 0.6 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.6 0.6 0.6 0.4 0.4 0.4 0.4 0.4 0.4 0.2]

Defuzzified Output: 3.99

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49917
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49918

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49919

Positive Score for each review :
0.3

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.6 0.6]

Aggregated Output: [0. 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive

Review: 49920

Positive Score for each review :
0.2

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49921

Positive Score for each review :
0.3

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.6 0.6]

Aggregated Output: [0.2 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.12

Output after Defuzzification: Positive
Doc sentiment: positive

Review: 49922

Positive Score for each review :
0.1

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49923

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49924

Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49925
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49926


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49927
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49928

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49929
```

```
Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive

Review:  49930

Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49931
```

Positive Score for each review :
0.2

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49932

Positive Score for each review :
0.0

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49933

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49934

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49935
```

```
Positive Score for each  review :
0.2


Negative Score for each  review :
0.2


Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4


Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]


Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]


Defuzzified Output: 4.61


Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49936


Positive Score for each  review :
0.2


Negative Score for each  review :
0.1


Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4


Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]


Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]


Defuzzified Output: 4.88


Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49937
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49938


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49939
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49940

Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49941
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49942

Positive Score for each  review :
0.3

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.2 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.12

Output after Defuzzification: Positive
Doc sentiment: negative

Review:  49943
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49944

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49945
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49946

Positive Score for each  review :
0.0

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49947
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49948

Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49949
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49950

Positive Score for each  review :
0.0

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49951
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49952

Positive Score for each review :
0.2

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49953

```
Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49954


Positive Score for each review :
0.1

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49955
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49956

Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49957
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49958

Positive Score for each review :
0.1

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49959

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49960

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49961

Positive Score for each review :
0.0

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49962

Positive Score for each review :
0.2

Negative Score for each review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.4 0.4 0.4]

Aggregated Output: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49963

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49964

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49965
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49966

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49967
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive

Review:  49968

Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive

Review:  49969
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49970


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49971
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49972

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49973

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49974

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49975
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49976


Positive Score for each  review :
0.1

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.91

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49977
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49978


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49979
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49980

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49981
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49982


Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49983
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49984

Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49985
```

```
Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive

Review:  49986

Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49987
```

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49988

Positive Score for each  review :
0.2

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.2 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.88

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49989
```

```
Positive Score for each  review :
0.3

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.6

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.6 0.6]

Aggregated Output: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6]

Defuzzified Output: 5.26

Output after Defuzzification: Positive
Doc sentiment: positive


Review:  49990

Positive Score for each  review :
0.0

Negative Score for each  review :
0.3

Firing Strength of Negative (wneg): 0.6
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.0

Resultant consequents MFs:
op_activation_low: [0.6 0.6 0.6 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Aggregated Output: [0.6 0.6 0.6 0.4 0.4 0.4 0.4 0.4 0.4 0.2]

Defuzzified Output: 3.99

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49991
```

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49992

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: positive

Review: 49993

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49994

Positive Score for each  review :
0.1

Negative Score for each  review :
0.3

Firing Strength of Negative (wneg): 0.6
Firing Strength of Neutral (wneu): 0.4
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.6 0.6 0.6 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.6 0.6 0.6 0.4 0.4 0.4 0.4 0.4 0.4 0.2]

Defuzzified Output: 3.99

Output after Defuzzification: Negative
Doc sentiment: negative

Review:  49995
```

```
Positive Score for each  review :
0.2

Negative Score for each  review :
0.0

Firing Strength of Negative (wneg): 0.0
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.4

Resultant consequents MFs:
op_activation_low: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.4 0.4 0.4]

Aggregated Output: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.4]

Defuzzified Output: 4.98

Output after Defuzzification: Negative
Doc sentiment: positive


Review:  49996

Positive Score for each  review :
0.1

Negative Score for each  review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative


Review:  49997
```

Positive Score for each review :
0.1

Negative Score for each review :
0.2

Firing Strength of Negative (wneg): 0.4
Firing Strength of Neutral (wneu): 0.6
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.4 0.4 0.4 0.4 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.4 0.2]

Defuzzified Output: 4.52

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49998

Positive Score for each review :
0.1

Negative Score for each review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0. 0. 0. 0. 0.]
op_activation_med: [0. 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0. 0. 0. 0. 0. 0. 0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative

Review: 49999

```
Positive Score for each  review :
0.1

Negative Score for each  review :
0.1

Firing Strength of Negative (wneg): 0.2
Firing Strength of Neutral (wneu): 0.8
Firing Strength of Positive (wpos): 0.2

Resultant consequents MFs:
op_activation_low: [0.2 0.2 0.2 0.2 0.2 0.  0.  0.  0.  0. ]
op_activation_med: [0.  0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]
op_activation_high: [0.  0.  0.  0.  0.  0.  0.2 0.2 0.2 0.2]

Aggregated Output: [0.2 0.2 0.4 0.6 0.8 0.8 0.8 0.6 0.4 0.2]

Defuzzified Output: 4.81

Output after Defuzzification: Negative
Doc sentiment: negative
```

[ ]:

1.4   Evaluation

```python
for i in range(len(doc)):
    if sentiment_doc[i] == 'positive':
        sentiment_doc[i] = 'Positive'
    else:
        sentiment_doc[i] = 'Negative'
```

```python
count=0
for k in range(len(doc)):
    if(sentiment_doc[k]==sentiment[k]):
        count=count+1
print("Accuracy is: "+ str(round(count/len(doc)*100,2)))
```

```
Accuracy is: 54.91
```

```python
from sklearn.metrics import f1_score, precision_score, recall_score
y_true = sentiment_doc
y_pred = sentiment

p1=precision_score(y_true, y_pred, average='macro')
```

```
print("Precision score (MACRO): " + str(round((p1*100),2)))

r1=recall_score(y_true, y_pred, average='macro')

print("Recall score (MACRO): " + str(round((r1*100),2)))

f1=f1_score(y_true, y_pred, average='macro')
f2=f1_score(y_true, y_pred, average='micro')

print("F1 score (MACRO): " + str(round((f1*100),2)))
print("F1 score (MICRO): "+ str(round((f2*100),2)))

end = time.time()
print("Execution Time: "+str(round((end - start),3))+" secs")
```

```
Precision score (MACRO): 71.97
Recall score (MACRO): 54.91
F1 score (MACRO): 44.04
F1 score (MICRO): 54.91
Execution Time: 429.119 secs
```

```
[ ]: from sklearn.metrics import classification_report
     print("Classification Report\n",classification_report(y_true, y_pred,␣
      ↪labels=['Positive','Negative'], target_names = ['Neg', 'Pos']))
```

```
Classification Report
              precision    recall  f1-score   support

         Neg       0.91      0.11      0.19     25000
         Pos       0.53      0.99      0.69     25000

    accuracy                           0.55     50000
   macro avg       0.72      0.55      0.44     50000
weighted avg       0.72      0.55      0.44     50000
```
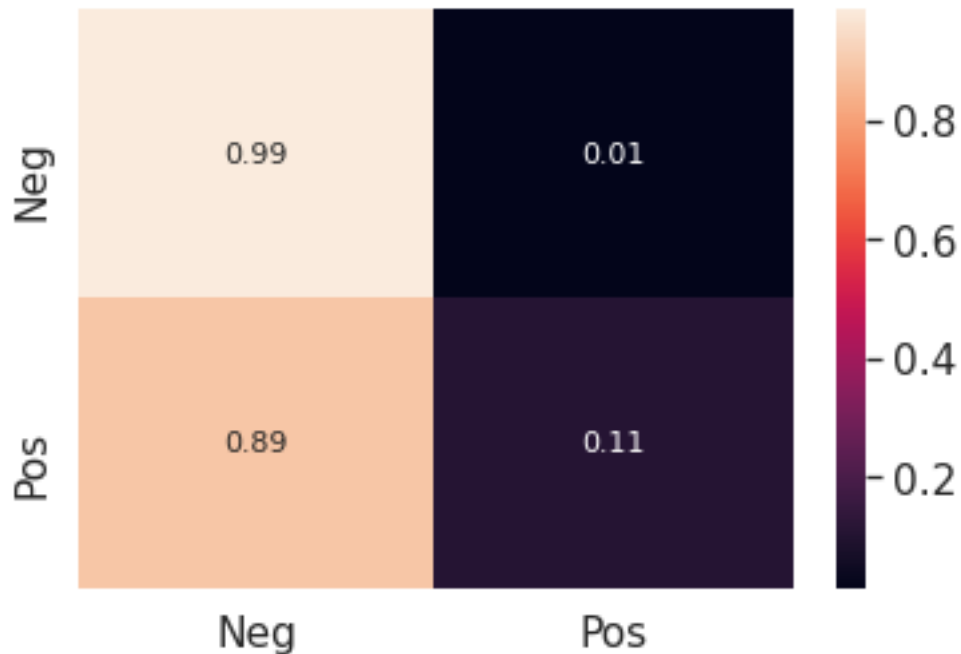
```
[ ]: from sklearn.metrics import confusion_matrix
     import seaborn as sn

     cm=confusion_matrix(y_true, y_pred)
     cm = cm.astype('float') / cm.sum(axis=1)[:, np.newaxis]
     cm = pd.DataFrame(cm, ['Neg', 'Pos'],['Neg', 'Pos'] )# matrix,names row,names␣
      ↪col,
     # plt.figure(figsize=(10,7))
     sn.set(font_scale=1.4) # for label size
     sn.heatmap(cm, annot=True, annot_kws={"size": 11}, fmt=".2f") # font size
```

```
plt.show()
```



```
[ ]: from sklearn.metrics import accuracy_score
     accuracy_score(y_true, y_pred)
```

```
[ ]: 0.54908
```

```
[ ]:
```

```
[ ]: !sudo apt-get install texlive-xetex texlive-fonts-recommended␣
     ↪texlive-generic-recommended
```

```
Selecting previously unselected package texlive-base.
Preparing to unpack .../37-texlive-base_2017.20180305-1_all.deb ...
Unpacking texlive-base (2017.20180305-1) ...
Selecting previously unselected package texlive-fonts-recommended.
Preparing to unpack .../38-texlive-fonts-recommended_2017.20180305-1_all.deb ...
Unpacking texlive-fonts-recommended (2017.20180305-1) ...
Selecting previously unselected package texlive-plain-generic.
Preparing to unpack .../39-texlive-plain-generic_2017.20180305-2_all.deb ...
Unpacking texlive-plain-generic (2017.20180305-2) ...
Selecting previously unselected package texlive-generic-recommended.
Preparing to unpack .../40-texlive-generic-recommended_2017.20180305-1_all.deb
...
Unpacking texlive-generic-recommended (2017.20180305-1) ...
Selecting previously unselected package texlive-latex-base.
Preparing to unpack .../41-texlive-latex-base_2017.20180305-1_all.deb ...
```

```
Unpacking texlive-latex-base (2017.20180305-1) ...
Selecting previously unselected package texlive-latex-recommended.
Preparing to unpack .../42-texlive-latex-recommended_2017.20180305-1_all.deb ...
Unpacking texlive-latex-recommended (2017.20180305-1) ...
Selecting previously unselected package texlive-pictures.
Preparing to unpack .../43-texlive-pictures_2017.20180305-1_all.deb ...
Unpacking texlive-pictures (2017.20180305-1) ...
Selecting previously unselected package texlive-latex-extra.
Preparing to unpack .../44-texlive-latex-extra_2017.20180305-2_all.deb ...
Unpacking texlive-latex-extra (2017.20180305-2) ...
Selecting previously unselected package tipa.
Preparing to unpack .../45-tipa_2%3a1.3-20_all.deb ...
Unpacking tipa (2:1.3-20) ...
Selecting previously unselected package texlive-xetex.
Preparing to unpack .../46-texlive-xetex_2017.20180305-1_all.deb ...
Unpacking texlive-xetex (2017.20180305-1) ...
Setting up libgs9-common (9.26~dfsg+0-0ubuntu0.18.04.14) ...
Setting up libkpathsea6:amd64 (2017.20170613.44572-8ubuntu0.1) ...
Setting up libjs-jquery (3.2.1-1) ...
Setting up libtexlua52:amd64 (2017.20170613.44572-8ubuntu0.1) ...
Setting up fonts-droid-fallback (1:6.0.1r16-1.1) ...
Setting up libsynctex1:amd64 (2017.20170613.44572-8ubuntu0.1) ...
Setting up libptexenc1:amd64 (2017.20170613.44572-8ubuntu0.1) ...
Setting up tex-common (6.09) ...
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based
frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line
76.)
debconf: falling back to frontend: Readline
update-language: texlive-base not installed and configured, doing nothing!
Setting up poppler-data (0.4.8-2) ...
Setting up tex-gyre (20160520-1) ...
Setting up preview-latex-style (11.91-1ubuntu1) ...
Setting up fonts-texgyre (20160520-1) ...
Setting up fonts-noto-mono (20171026-2) ...
Setting up fonts-lato (2.0-2) ...
Setting up libcupsfilters1:amd64 (1.20.2-0ubuntu3.1) ...
Setting up libcupsimage2:amd64 (2.2.7-1ubuntu2.8) ...
Setting up libjbig2dec0:amd64 (0.13-6) ...
Setting up ruby-did-you-mean (1.2.0-2) ...
Setting up t1utils (1.41-2) ...
Setting up ruby-net-telnet (0.1.1-2) ...
Setting up libijs-0.35:amd64 (0.35-13) ...
Setting up rubygems-integration (1.11) ...
Setting up libpotrace0 (1.14-2) ...
Setting up javascript-common (11) ...
Setting up ruby-minitest (5.10.3-1) ...
Setting up libzzip-0-13:amd64 (0.13.62-3.1ubuntu0.18.04.1) ...
```

```
Setting up libgs9:amd64 (9.26~dfsg+0-0ubuntu0.18.04.14) ...
Setting up libtexluajit2:amd64 (2017.20170613.44572-8ubuntu0.1) ...
Setting up fonts-lmodern (2.004.5-3) ...
Setting up ruby-power-assert (0.3.0-1) ...
Setting up texlive-binaries (2017.20170613.44572-8ubuntu0.1) ...
update-alternatives: using /usr/bin/xdvi-xaw to provide /usr/bin/xdvi.bin
(xdvi.bin) in auto mode
update-alternatives: using /usr/bin/bibtex.original to provide /usr/bin/bibtex
(bibtex) in auto mode
Setting up texlive-base (2017.20180305-1) ...
mktexlsr: Updating /var/lib/texmf/ls-R-TEXLIVEDIST...
mktexlsr: Updating /var/lib/texmf/ls-R-TEXMFMAIN...
mktexlsr: Updating /var/lib/texmf/ls-R...
mktexlsr: Done.
tl-paper: setting paper size for dvips to a4: /var/lib/texmf/dvips/config
/config-paper.ps
tl-paper: setting paper size for dvipdfmx to a4: /var/lib/texmf/dvipdfmx
/dvipdfmx-paper.cfg
tl-paper: setting paper size for xdvi to a4: /var/lib/texmf/xdvi/XDvi-paper
tl-paper: setting paper size for pdftex to a4:
/var/lib/texmf/tex/generic/config/pdftexconfig.tex
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based
frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm line
76.)
debconf: falling back to frontend: Readline
Setting up texlive-fonts-recommended (2017.20180305-1) ...
Setting up texlive-plain-generic (2017.20180305-2) ...
Setting up texlive-generic-recommended (2017.20180305-1) ...
Setting up texlive-latex-base (2017.20180305-1) ...
Setting up lmodern (2.004.5-3) ...
Setting up texlive-latex-recommended (2017.20180305-1) ...
Setting up texlive-pictures (2017.20180305-1) ...
Setting up tipa (2:1.3-20) ...
Regenerating '/var/lib/texmf/fmtutil.cnf-DEBIAN'... done.
Regenerating '/var/lib/texmf/fmtutil.cnf-TEXLIVEDIST'... done.
update-fmtutil has updated the following file(s):
        /var/lib/texmf/fmtutil.cnf-DEBIAN
        /var/lib/texmf/fmtutil.cnf-TEXLIVEDIST
If you want to activate the changes in the above file(s),
you should run fmtutil-sys or fmtutil.
Setting up texlive-latex-extra (2017.20180305-2) ...
Setting up texlive-xetex (2017.20180305-1) ...
Setting up ruby2.5 (2.5.1-1ubuntu1.9) ...
Setting up ruby (1:2.5.1) ...
Setting up ruby-test-unit (3.2.5-1) ...
Setting up rake (12.3.1-1ubuntu0.1) ...
Setting up libruby2.5:amd64 (2.5.1-1ubuntu1.9) ...
```

```
Processing triggers for mime-support (3.60ubuntu1) ...
Processing triggers for libc-bin (2.27-3ubuntu1.2) ...
/sbin/ldconfig.real: /usr/local/lib/python3.7/dist-
packages/ideep4py/lib/libmkldnn.so.0 is not a symbolic link
```

[ ]:

[ ]: `!jupyter nbconvert --to pdf Fuzzy_Systems_Twitter_V2.ipynb`