PDL Lab10: Deployment of DNN as a web service

ANNAPOORNIMA S

225229101

In [1]:
```
import nltk
```

```
C:\Users\sweth\Downloads\nlp\lib\site-packages\scipy\__init__.py:155: UserWar
ning: A NumPy version >=1.18.5 and <1.25.0 is required for this version of Sc
iPy (detected version 1.25.2
  warnings.warn(f"A NumPy version >={np_minversion} and <{np_maxversion}"
```

In [6]:
```
text=input("enter the text: ")
nltk.download('vader_lexicon')
from nltk.sentiment.vader import SentimentIntensityAnalyzer
sid=SentimentIntensityAnalyzer()
score=((sid.polarity_scores(str(text))))['compound']
if(score>0):
    label='This sentence is positive'
elif(score ==0):
    label='This sentence is neutral'
else:
    label='This sentence is negative'
print(label)
```

```
enter the text: good
This sentence is positive

[nltk_data] Downloading package vader_lexicon to
[nltk_data]     C:\Users\sweth\AppData\Roaming\nltk_data...
[nltk_data]   Package vader_lexicon is already up-to-date!
```

In [15]:
```
import pickle
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.naive_bayes import MultinomialNB

# Sample training data (replace with your actual data)
data = [
    ("I love this product!", "positive"),
    ("This is terrible.", "negative"),
    # ... more training examples ...
]

# Preprocess and prepare data
texts, labels = zip(*data)

vectorizer = CountVectorizer()
X = vectorizer.fit_transform(texts)

model = MultinomialNB()
model.fit(X, labels)

# Save the trained model to a pickle file
with open("sentiment_model.pkl", "wb") as file:
    pickle.dump((vectorizer, model), file)
```

In [17]:
```
import pickle

# Load the trained model from the pickle file
with open("sentiment_model.pkl", "rb") as file:
    vectorizer, model = pickle.load(file)
print("Predicted sentiment:", label)
```

```
Predicted sentiment: This sentence is positive
```