

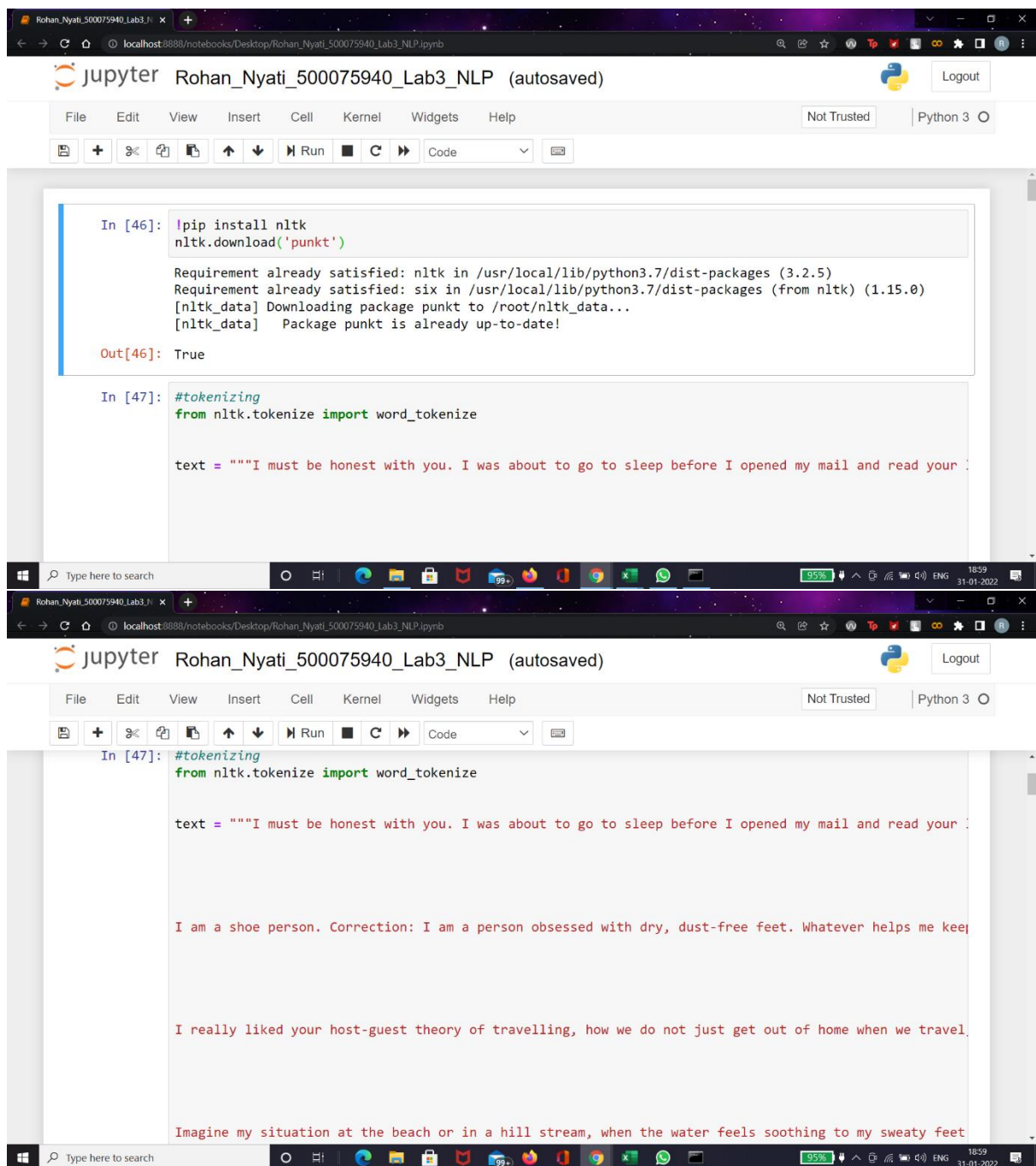
Rohan Nyati

500075940

R177219148

Batch – 5 (Ai & MI)

Experiment – 3



The image displays two screenshots of a Jupyter Notebook interface, likely running on a local host. The notebook is titled "Rohan_Nyati_500075940_Lab3_NLP (autosaved)".

The first screenshot shows the execution of a code cell (In [46]) that installs the NLTK package and downloads the 'punkt' tokenizer data. The output (Out[46]) indicates that the requirements are already satisfied and the package is up-to-date.

The second screenshot shows the execution of a code cell (In [47]) that imports the word_tokenize function from the nltk.tokenize module. The text variable is defined as a string containing a paragraph of text.

```
In [46]: !pip install nltk
         nltk.download('punkt')

Requirement already satisfied: nltk in /usr/local/lib/python3.7/dist-packages (3.2.5)
Requirement already satisfied: six in /usr/local/lib/python3.7/dist-packages (from nltk) (1.15.0)
[nltk_data] Downloading package punkt to /root/nltk_data...
[nltk_data] Package punkt is already up-to-date!

Out[46]: True

In [47]: #tokenizing
         from nltk.tokenize import word_tokenize

         text = """I must be honest with you. I was about to go to sleep before I opened my mail and read your ...

         I am a shoe person. Correction: I am a person obsessed with dry, dust-free feet. Whatever helps me keep

         I really liked your host-guest theory of travelling, how we do not just get out of home when we travel.

         Imagine my situation at the beach or in a hill stream, when the water feels soothing to my sweaty feet
```

Rohan_Nyati_500075940_Lab3_NLP (autosaved)

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3

```
Eventually, when I have to get out of the water, I give up my fight with the dirt and wear those damn shoes.

I am a person who likes symmetry. All in or none at all. It's difficult being me in this world with it: a person who likes symmetry.

Thank you for being the listener you are. This has been a selfish post. I used your letter for my sense of direction.

t1 = word_tokenize(text)
t1
```

```
['preferences',
 'between',
 'shoes',
 'and',
 'slippers',
 '']
```

Rohan_Nyati_500075940_Lab3_NLP (autosaved)

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3

```
me,
',',
'I',
'need',
'proper',
'peaceful',
'sleep',
'and',
'let',
',',
'e'

In [48]: #stemming
from nltk.stem import PorterStemmer
ps = PorterStemmer()
t2=[]
for i in t1:
    print(i, " : ", ps.stem(i))
    i = ps.stem(i)
    t2.append(i)
```

```
honest : honest
with : with
you : you
. : .
I : I
was : wa
about : about
to : to
go : go
to : to
sleep : sleep
before : before
I : I
opened : open
my : my
mail : mail

In [49]: #Lemmatization
import nltk
nltk.download('wordnet')

[nltk_data] Downloading package wordnet to /root/nltk_data...
[nltk_data] Package wordnet is already up-to-date!
```

```
opened : open
my : my
mail : mail

In [49]: #Lemmatization
import nltk
nltk.download('wordnet')

[nltk_data] Downloading package wordnet to /root/nltk_data...
[nltk_data] Package wordnet is already up-to-date!

Out[49]: True

In [50]: #Lemmatization
from nltk.stem import WordNetLemmatizer

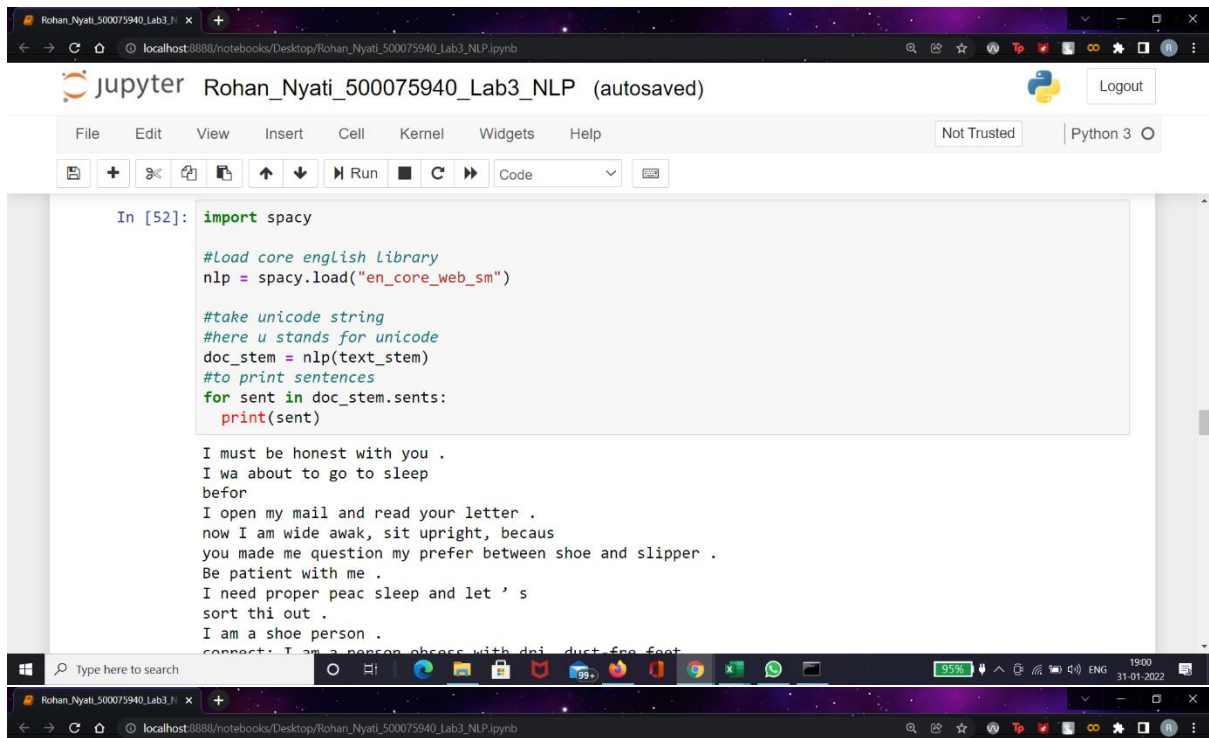
lemmatizer = WordNetLemmatizer()
t3=[]
for i in t1:
    print(i, " : ", lemmatizer.lemmatize(i))
    i=lemmatizer.lemmatize(i)
    t3.append(i)
```

```
be : be
honest : honest
with : with
you : you
. : .
I : I
was : wa
about : about
to : to
go : go
to : to
sleep : sleep
before : before
I : I
opened : opened
my : my
mail : mail

In [51]: #after stemming
from nltk.tokenize.treebank import TreebankWordDetokenizer
text_stem=TreebankWordDetokenizer().detokenize(t2)
text_stem
```

```
In [51]: #after stemming
from nltk.tokenize.treebank import TreebankWordDetokenizer
text_stem=TreebankWordDetokenizer().detokenize(t2)
text_stem

Out[51]: 'I must be honest with you . I wa about to go to sleep befor I open my mail and read your letter . no
w I am wide awak, sit upright, becaus you made me question my prefer between shoe and slipper . Be pa
tient with me . I need proper peac sleep and let ' s sort thi out . I am a shoe person . correct: I a
m a person obsess with dri, dust-fre feet . whatev help me keep a grip on my walk and postur in spite
of my profus sweatl feet, I am that person . whatev keep the graini, pokey sensat of soil or sand in
part of my skin away, I am that person . I guess, I am a shoe person becaus it is loyal to my whole f
eet . not make part of it lie expos and part of it cover, without ani symmetri . I am also cotton soc
k person, prefer red . sometim, I am a clean matt (anti-slipperi) floor person . basic, I am a person
with issu . I realli like your host-guest theori of travel, how we do not just get out of home when w
e travel, the home expand when we step foot at a place engulf it into our comfort zone . but the thin
g is I wear sock all the time in my hous, and open them when I go to bed, replac the sock with a comf
ort . I guess I need that comfort zone close and mayb, mine is restrict to my own skin . So much so,
that it doesn ' t even includ my own home . when I travel, I like wear shoe, with a firm grip on myse
lf, dust free, protect . when I face situat where I have to open them and I don ' t want to, I usual
wrinkl my nose . It doesn ' t get better that I can ' t wear those shoe again with a dirti feet . I t
ake a handkerchief . imagin my situat at the beach or in a hill stream, when the water feel sooth to
my sweatl feet and remov the dust , onli to attract more of it when I walk on the sand . I let it inni
```

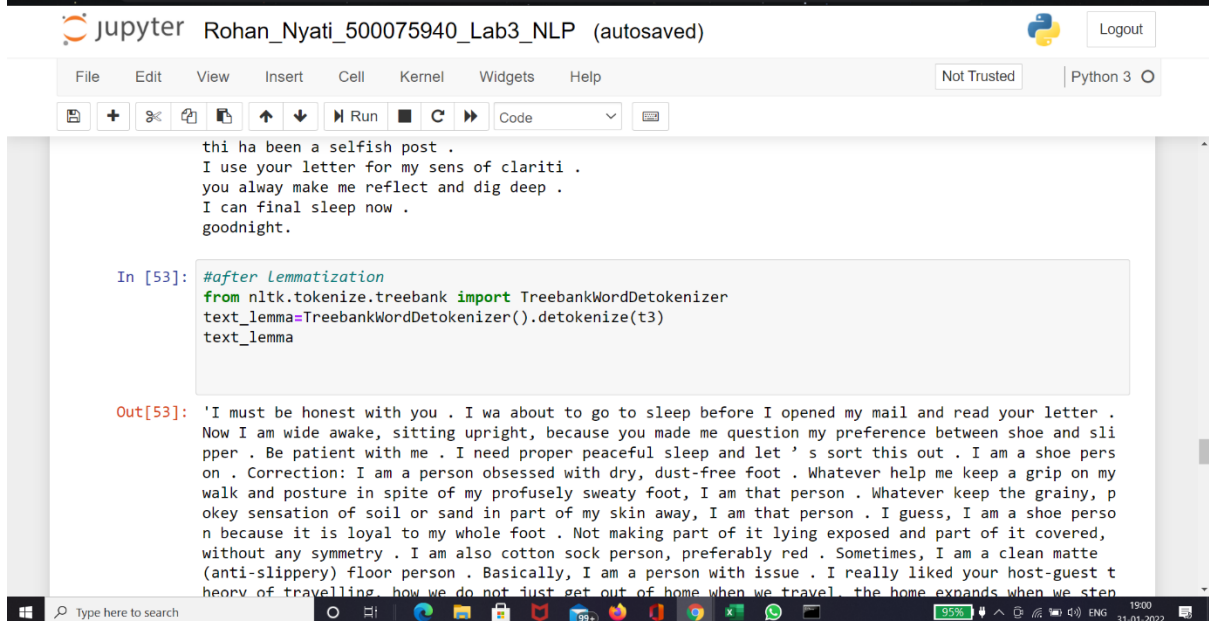


```
In [52]: import spacy

#load core english library
nlp = spacy.load("en_core_web_sm")

#take unicode string
#here u stands for unicode
doc_stem = nlp(text_stem)
#to print sentences
for sent in doc_stem.sents:
    print(sent)

I must be honest with you .
I wa about to go to sleep
befor
I open my mail and read your letter .
now I am wide awak, sit upright, becaus
you made me question my prefer between shoe and slipper .
Be patient with me .
I need proper peac sleep and let ' s
sort thi out .
I am a shoe person .
connect: I am a person obses with dai dust free foot
```



```
thi ha been a selfish post .
I use your letter for my sens of clariti .
you alway make me reflect and dig deep .
I can final sleep now .
goodnight.

In [53]: #after Lemmatization
from nltk.tokenize.treebank import TreebankWordDetokenizer
text_lemma=TreebankWordDetokenizer().detokenize(t3)
text_lemma

Out[53]: 'I must be honest with you . I wa about to go to sleep before I opened my mail and read your letter .
Now I am wide awake, sitting upright, because you made me question my preference between shoe and slipper . Be patient with me . I need proper peaceful sleep and let ' s sort this out . I am a shoe person . Correction: I am a person obsessed with dry, dust-free foot . Whatever help me keep a grip on my walk and posture in spite of my profusely sweaty foot, I am that person . Whatever keep the grainy, p
okey sensation of soil or sand in part of my skin away, I am that person . I guess, I am a shoe person because it is loyal to my whole foot . Not making part of it lying exposed and part of it covered, without any symmetry . I am also cotton sock person, preferably red . Sometimes, I am a clean matte (anti-slippery) floor person . Basically, I am a person with issue . I really liked your host-guest theory of travelling . how we do not just get out of home when we travel . the home expands when we step
```


Rohan_Nyati_500075940_Lab3_NLP (autosaved)

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3

at all . It ' s difficult being me in this world with it shade of grey . But then, my favourite colour is red and thankfully it cover the entire spectrum . All I need is an emotion, and the rest is take n care of . Thank you for being the listener you are . This ha been a selfish post . I used your letter for my sense of clarity . You always make me reflect and dig deep . I can finally sleep now . Good night.'

```
In [54]: import spacy

#load core english library
nlp = spacy.load("en_core_web_sm")

#take unicode string
#here u stands for unicode
doc_lemma = nlp(text_lemma)
#to print sentences
for sent in doc_lemma.sents:
    print(sent)
```

I must be honest with you .
I wa about to go to sleep before I opened my mail and read your letter .
Now I am wide awake, sitting upright, because you made me question my preference between shoe and slipper .
Be patient with me