

RESTAURANT CUSTOMER REVIEWS

NATURAL LANGUAGE PROCESSING

In [1]:

```
import numpy as np
import pandas as pd

#To IGNORE warning messages due to version mismatch of Jupyter Notebook
import warnings
warnings.filterwarnings('ignore')
```

In [2]:

```
# delimiter - To mangae tsv(ta seperated value) file as csv(comma seperated value)
# quoting - To ignore the values in quotes (To consider all)

dataset = pd.read_csv('E:/NLP/Dataset.tsv', delimiter = '\t', quoting = 3)
```

In [3]:

```
dataset.head()
```

Out[3]:

| | Review | Liked |
|---|------------------------------------------------------|-------|
| 0 | Wow... Loved this place. | 1 |
| 1 | Crust is not good. | 0 |
| 2 | Not tasty and the texture was just nasty. | 0 |
| 3 | Stopped by during the late May bank holiday of... | 1 |
| 4 | The selection on the menu was great and so wer... | 1 |

In [4]:

```
dataset.shape
```

Out[4]:

```
(1000, 2)
```

In [5]:

```
dataset.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1000 entries, 0 to 999
Data columns (total 2 columns):
 #   Column  Non-Null Count  Dtype  
---  -
 0   Review  1000 non-null   object 
 1   Liked   1000 non-null   int64  
dtypes: int64(1), object(1)
memory usage: 15.8+ KB
```

In [6]:

```
dataset['Liked'].value_counts()
```

Out[6]:

```
1    500
```

```
0      500
Name: Liked, dtype: int64
```

In [7]:

```
dataset.isna().sum()
```

Out[7]:

```
Review      0
Liked       0
dtype: int64
```

In [8]:

```
dataset.head()
```

Out[8]:

| | Review | Liked |
|---|---------------------------------------------------|-------|
| 0 | Wow... Loved this place. | 1 |
| 1 | Crust is not good. | 0 |
| 2 | Not tasty and the texture was just nasty. | 0 |
| 3 | Stopped by during the late May bank holiday of... | 1 |
| 4 | The selection on the menu was great and so wer... | 1 |

In [9]:

```
dataset['Review']
```

Out[9]:

```
0      Wow... Loved this place.
1      Crust is not good.
2      Not tasty and the texture was just nasty.
3      Stopped by during the late May bank holiday of...
4      The selection on the menu was great and so wer...
...
995    I think food should have flavor and texture an...
996      Appetite instantly gone.
997    Overall I was not impressed and would not go b...
998    The whole experience was underwhelming, and I ...
999    Then, as if I hadn't wasted enough of my life ...
Name: Review, Length: 1000, dtype: object
```

In [10]:

```
dataset['Review'][0]
```

Out[10]:

```
'Wow... Loved this place.'
```

In [11]:

```
# import re - To remove unwanted symbols like dots(...), @, #
import re

#Anything other than characters need to be substituted with space ' ' and
#Symbol '^' used to mention characters other than a to z or A to Z
review = re.sub( '[^a-zA-Z]' , ' ' , dataset['Review'][0] )
review
```

Out[11]:

```
'Wow    Loved this place '
```

In [12]:

```
re.sub( '[^a-zA-Z]' , ' ' , "@DarshanIngle is the #trainer with #Eduonix. Enjoy NLP Webin  
ar. I hope its amazing...." )
```

Out[12]:

```
' DarshanIngle is the  trainer with  Eduonix  Enjoy NLP Webinar  I hope its amazing  '
```

In [13]:

```
review = review.lower()  
review
```

Out[13]:

```
'wow    loved this place '
```

In [14]:

```
review = review.split()  
review
```

Out[14]:

```
['wow', 'loved', 'this', 'place']
```

In [15]:

```
# Remove the Stopwords  
import nltk  
#nltk.download('stopword')  
from nltk.corpus import stopwords
```

In [16]:

```
stopwords.words('english')
```

Out[16]:

```
['i',  
'me',  
'my',  
'myself',  
'we',  
'our',  
'ours',  
'ourselves',  
'you',  
'you're',  
'you've',  
'you'll',  
'you'd',  
'your',  
'yours',  
'yourself',  
'yourselves',  
'he',  
'him',  
'his',  
'himself',  
'she',  
'she's',  
'her',  
'hers',  
'herself',  
'it',  
'it's',  
'its',  
'itself',  
'they',  
'them',  
'their',  
'theirs',  
'themselves']
```

themselves',
'what',
'which',
'who',
'whom',
'this',
'that',
'that'll',
'these',
'those',
'am',
'is',
'are',
'was',
'were',
'be',
'been',
'being',
'have',
'has',
'had',
'having',
'do',
'does',
'did',
'doing',
'a',
'an',
'the',
'and',
'but',
'if',
'or',
'because',
'as',
'until',
'while',
'of',
'at',
'by',
'for',
'with',
'about',
'against',
'between',
'into',
'through',
'during',
'before',
'after',
'above',
'below',
'to',
'from',
'up',
'down',
'in',
'out',
'on',
'off',
'over',
'under',
'again',
'further',
'then',
'once',
'here',
'there',
'when',
'where',
'why',
'how',
'_ _ _'

'all',
'any',
'both',
'each',
'few',
'more',
'most',
'other',
'some',
'such',
'no',
'nor',
'not',
'only',
'own',
'same',
'so',
'than',
'too',
'very',
's',
't',
'can',
'will',
'just',
'don',
'don't',
'should',
'should've',
'now',
'd',
'll',
'm',
'o',
're',
've',
'y',
'ain',
'aren',
'aren't',
'couldn',
'couldn't',
'didn',
'didn't',
'doesn',
'doesn't',
'hadn',
'hadn't',
'hasn',
'hasn't',
'haven',
'haven't',
'isn',
'isn't',
'ma',
'mightn',
'mightn't',
'mustn',
'mustn't',
'needn',
'needn't',
'shan',
'shan't',
'shouldn',
'shouldn't',
'wasn',
'wasn't',
'weren',
'weren't',
'won',
'won't',
'wouldn',
'wouldn't'

In [17]:

```
len(stopwords.words('english'))
```

Out[17]:

179

In [18]:

```
review
```

Out[18]:

```
['wow', 'loved', 'this', 'place']
```

In [19]:

```
# List Comprehension - To remove stopwords
review1 = [ word for word in review if not word in stopwords.words('english') ]
review1
```

Out[19]:

```
['wow', 'loved', 'place']
```

In [20]:

```
# Stemming

from nltk.stem.porter import PorterStemmer
ps = PorterStemmer()
review1 = [ ps.stem(word) for word in review1 ]
review1
```

Out[20]:

```
['wow', 'love', 'place']
```

In [21]:

```
review2 = ' '.join(review1)
review2
```

Out[21]:

```
'wow love place'
```

In [22]:

```
# NLP Model : Bag of Words Model - Uses CountVectorizer
# It is not a World Class model
# But still a good model to start with, considering our basic session

corpus1 = []
from sklearn.feature_extraction.text import CountVectorizer
cv = CountVectorizer(max_features=3)
print(review2)
corpus1.append(review2)
print(corpus1)
```

```
wow love place
['wow love place']
```

In [23]:

```
X = cv.fit_transform(corpus1) #Responsible to convert Characters into Numbers
```

In [24]:

```
print(X.toarray())
```

```
[[1 1 1]]
```

```
In [25]:
```

```
dataset.shape
```

```
Out[25]:
```

```
(1000, 2)
```

```
In [26]:
```

```
dataset.head()
```

```
Out[26]:
```

| | Review | Liked |
|---|---------------------------------------------------|-------|
| 0 | Wow... Loved this place. | 1 |
| 1 | Crust is not good. | 0 |
| 2 | Not tasty and the texture was just nasty. | 0 |
| 3 | Stopped by during the late May bank holiday of... | 1 |
| 4 | The selection on the menu was great and so wer... | 1 |

```
In [27]:
```

```
import re
import nltk
# nltk.download('stopwords')
from nltk.corpus import stopwords
from nltk.stem.porter import PorterStemmer
corpus = []

for i in range(0, 1000):
    review = re.sub('[^a-zA-Z]', ' ', dataset['Review'][i])
    review = review.lower()
    review = review.split()
    ps = PorterStemmer()
    review = [ ps.stem(word) for word in review if not word in stopwords.words('english') ]
    review = ' '.join(review)
    print(review)
    corpus.append(review)
```

```
wow love place
crust good
tasti textur nasti
stop late may bank holiday rick steve recommend love
select menu great price
get angri want damn pho
honeslti tast fresh
potato like rubber could tell made ahead time kept warmer
fri great
great touch
servic prompt
would go back
cashier care ever say still end wayyy overpr
tri cape cod ravoli chicken cranberri mmmmm
disgust pretti sure human hair
shock sign indic cash
highli recommend
waitress littl slow servic
place worth time let alon vega
like
burritto blah
food amaz
servic also cute
could care less interior beauti
perform
```

perfor
right red velvet cake ohhh stuff good
never brought salad ask
hole wall great mexican street taco friendli staff
took hour get food tabl restaur food luke warm sever run around like total overwhelm
worst salmon sashimi
also combo like burger fri beer decent deal
like final blow
found place accid could happier
seem like good quick place grab bite familiar pub food favor look elsewher
overal like place lot
redeem qualiti restaur inexpens
ampl portion good price
poor servic waiter made feel like stupid everi time came tabl
first visit hiro delight
servic suck
shrimp tender moist
deal good enough would drag establish
hard judg whether side good gross melt styrofoam want eat fear get sick
posit note server attent provid great servic
frozen puck disgust worst peopl behind regist
thing like prime rib dessert section
bad food damn gener
burger good beef cook right
want sandwich go firehous
side greek salad greek dress tasti pita hummu refresh
order duck rare pink tender insid nice char outsid
came run us realiz husband left sunglass tabl
chow mein good
horribl attitud toward custom talk one custom enjoy food
portion huge
love friendli server great food wonder imagin menu
heart attack grill downtown vega absolut flat line excus restaur
much seafood like string pasta bottom
salad right amount sauc power scallop perfectli cook
rip banana rip petrifi tasteless
least think refil water struggl wave minut
place receiv star appet
cocktail handmad delici
definit go back
glad found place
great food servic huge portion give militari discount
always great time do gringo
updat went back second time still amaz
got food appar never heard salt batter fish chewi
great way finish great
deal includ tast drink jeff went beyond expect
realli realli good rice time
servic meh
took min get milkshak noth chocol milk
guess known place would suck insid excalibur use common sens
scallop dish quit appal valu well
time bad custom servic
sweet potato fri good season well
today second time lunch buffet pretti good
much good food vega feel cheat wast eat opportun go rice compani
come like experienc underwhelm relationship parti wait person ask break
walk place smell like old greas trap other eat
turkey roast beef bland
place
pan cake everyon rave tast like sugari disast tailor palat six year old
love pho spring roll oh yummi tri
poor batter meat ratio made chicken tender unsatisfi
say food amaz
omelet die
everyth fresh delici
summari larg disappoint dine experi
like realli sexi parti mouth outrag flirt hottest person parti
never hard rock casino never ever step forward
best breakfast buffet
say bye bye tip ladi
never go
back

back
food arriv quickli
good
side cafe serv realli good food
server fantast found wife love roast garlic bone marrow ad extra meal anoth marrow go
good thing waiter help kept bloddi mari come
best buffet town price cannot beat
love mussel cook wine reduct duck tender potato dish delici
one better buffet
went tigerlilli fantast afternoon
food delici bartend attent person got great deal
ambien wonder music play
go back next trip
sooooo good
real sushi lover let honest yama good
least min pass us order food arriv busi
realli fantast thai restaur definit worth visit
nice spici tender
good price
check
pretti gross
better atmospher
kind hard mess steak
although much like look sound place actual experi bit disappoint
know place manag serv blandest food ever eaten prepar indian cuisin
worst servic boot least worri
servic fine waitress friendli
guy steak steak love son steak best worst place said best steak ever eaten
thought ventur away get good sushi place realli hit spot night
host staff lack better word bitch
bland like place number reason want wast time bad review leav
phenomen food servic ambianc
return
definit worth ventur strip pork belli return next time vega
place way overpr mediocr food
penn vodka excel
good select food includ massiv meatloaf sandwich crispi chicken wrap delish tuna melt tas
ti burger
manag rude
delici nyc bagel good select cream chees real lox caper even
great subway fact good come everi subway meet expect
serious solid breakfast
one best bar food vega
extrem rude realli mani restaur would love dine weekend vega
drink never empti made realli great menu suggest

waiter help friendli rare check us
husband ate lunch disappoint food servic
red curri much bamboo shoot tasti
nice blanket moz top feel like done cover subpar food
bathroom clean place well decor
menu alway chang food qualiti go servic extrem slow
servic littl slow consid serv peopl server food come slow pace
give thumb
watch waiter pay lot attent tabl ignor us
fianc came middl day greet seat right away
great restaur mandalay bay
wait forti five minut vain
crostini came salad stale
highlight great qualiti nigiri
staff friendli joint alway clean
differ cut piec day still wonder tender well well flavor
order voodoo pasta first time realli excel pasta sinc go gluten free sever year ago
place good
unfortun must hit bakeri leftov day everyth order stale
came back today sinc reloc still impress
seat immedi
menu divers reason price
avoid cost
restaur alway full never wait
delici
place hand one best place eat phoenix metro area
go look good food

go look good look
never treat bad
bacon hella salti
also order spinach avocado salad ingredi sad dress liter zero tast
realli vega fine dine use right menu hand ladi price list
waitress friendli
lordi khao soi dish miss curri lover
everyth menu terrif also thrill made amaz accommod vegetarian daughter
perhap caught night judg review inspir go back
servic leav lot desir
atmospher modern hip maintain touch cozi
weekli haunt definit place come back everi
liter sat minut one ask take order
burger absolut flavor meat total bland burger overcook charcoal flavor
also decid send back waitress look like verg heart attack
dress treat rude
probabl dirt
love place hit spot want someth healthi lack quantiti flavor
order lemon raspberri ice cocktail also incred
food suck expect suck could imagin
interest decor
realli like crepe station
also serv hot bread butter home made potato chip bacon bit top origin good
watch prepar delici food
egg roll fantast
order arriv one gyro miss
salad wing ice cream dessert left feel quit satisfi
realli sure joey vote best hot dog valley reader phoenix magazin
best place go tasti bowl pho
live music friday total blow
never insult felt disrespect
friendli staff
worth drive
heard good thing place exceed everi hope could dream
food great serviv
warm beer help
great brunch spot
servic friendli invit
good lunch spot
live sinc first last time step foot place
worst experi ever
must night place
side delish mix mushroom yukon gold pure white corn beateou
bug never show would given sure side wall bug climb kitchen
minut wait salad realiz come time soon
friend love salmon tartar
go back
extrem tasti
waitress good though
soggi good
jamaican mojito delici
small worth price
food rich order accordingli
shower area outsid rins take full shower unless mind nude everyon see
servic bit lack
lobster bisqu bussel sprout risotto filet need salt pepper cours none tabl
hope bode go busi someon cook come
either cold enough flavor bad
love bacon wrap date
unbeliev bargain
folk otto alway make us feel welcom special
main also uninspir
place first pho amaz
wonder experi made place must stop whenev town
food bad enough enjoy deal world worst annoy drunk peopl
fun chef
order doubl cheeseburg got singl patti fall apart pictur upload yeah still suck
great place coupl drink watch sport event wall cover tv
possibl give zero star
descript said yum yum sauc anoth said eel sauc yet anoth said spici mayo well none roll s
auc
say would hardest decis honestli dish tast suppos tast amaz
roll eye may stay sure go back tri

roll eye may stay safe go back till
everyon attent provid excel custom servic
horribl wast time money
dish quit flavour
time side restaur almost empti excus
busi either also build freez cold
like review said pay eat place
drink took close minut come one point
serious flavor delight folk
much better ayc sushi place went vega
light dark enough set mood
base sub par servic receiv effort show gratitud busi go back
owner realli great peopl
noth privileg work eat
greek dress creami flavor
overal think would take parent place made similar complaint silent felt
pizza good peanut sauc tasti
tabl servic pretti fast
fantast servic
well would given godfath zero star possibl
know make
tough short flavor
hope place stick around
bar vega ever recal charg tap water
restaur atmospher exquisit
good servic clean inexpens boot
seafood fresh gener portion
plu buck
servic par either
thu far visit twice food absolut delici time
good year ago
self proclaim coffe cafe wildli disappoint
veggitarian platter world
cant go wrong food
beat
stop place madison ironman friendli kind staff
chef friendli good job
better dedic boba tea spot even jenni pho
like patio servic outstand
goat taco skimp meat wow flavor
think
mac salad pretti bland get
went bachi burger friend recommend disappoint
servic stink
wait wait
place qualiti sushi qualiti restaur
would definit recommend wing well pizza
great pizza salad
thing went wrong burn saganaki
wait hour breakfast could done time better home
place amaz
hate disagre fellow yelper husband disappoint place
wait hour never got either pizza mani around us came later
know slow
staff great food delish incred beer select
live neighborhood disappoint back conveni locat
know pull pork could soooo delici
get incred fresh fish prepar care
go gave star rate pleas know third time eat bachi burger write review
love fact everyth menu worth
never dine place
food excel servic good
good beer drink select good food select
pleas stay away shrimp stir fri noodl
potato chip order sad could probabl count mani chip box probabl around
food realli bore
good servic check
greedi corpor never see anoth dime
never ever go back
much like go back get pass atroci servic never return
summer dine charm outdoor patio delight
expect good
fantast food

fantast 1000
order toast english muffin came untoast
food good
never go back
great food price high qualiti hous made
bu boy hand rude
point friend basic figur place joke mind make publicli loudli known
back good bbq lighter fare reason price tell public back old way
consid two us left full happi go wrong
bread made hous
downsid servic
also fri without doubt worst fri ever
servic except food good review
coupl month later return amaz meal
favorit place town shawarrrrrrma
black eye pea sweet potato unreal
disappoint
could serv vinaigrett may make better overal dish still good
go far mani place never seen restaur serv egg breakfast espec
mom got home immedi got sick bite salad
server pleasant deal alway honor pizza hut coupon
truli unbeliev good glad went back
fantast servic pleas atmospher
everyth gross
love place
great servic food
first bathroom locat dirti seat cover replenish plain yucki
burger got gold standard burger kind disappoint
omg food delicioso
noth authent place
spaghetti noth special whatsoev
dish salmon best great
veget fresh sauc feel like authent thai
worth drive tucson
select probabl worst seen vega none
pretti good beer select
place like chipotl better
classi warm atmospher fun fresh appet succul steak basebal steak
star brick oven bread app
eaten multipl time time food delici
sat anoth ten minut final gave left
terribl
everyon treat equal special
take min pancak egg
delici
good side staff genuin pleasant enthusiast real treat
sadli gordon ramsey steak place shall sharpli avoid next trip vega
alway even wonder food delici
best fish ever life
bathroom next door nice
buffet small food offer bland
outstand littl restaur best food ever tast
pretti cool would say
definit turn doubt back unless someon els buy
server great job handl larg rowdi tabl
find wast food despici food
wife lobster bisqu soup lukewarm
would come back sushi crave vega
staff great ambianc great
deserv star
left stomach ach felt sick rest day
drop ball
dine space tini elegantli decor comfort
custom order way like usual eggplant green bean stir fri love
bean rice mediocr best
best taco town far
took back money got outta
interest part town place amaz
rude inconsider manag
staff friendli wait time serv horribl one even say hi first minut
back
great dinner
servic outshin definit recommend halibut

servic outshin definit recommend halibut
food terribl
never ever go back told mani peopl happen
recommend unless car break front starv
come back everi time vega
place deserv one star food
disgrac
def come back bowl next time
want healthi authent ethic food tri place
continu come ladi night andddd date night highli recommend place anyon area
sever time past experi alway great
walk away stuf happi first vega buffet experi
servic excel price pretti reason consid vega locat insid crystal shop mall aria
summar food incred nay transcend noth bring joy quit like memori pneumat condiment dispen
s
problabl one peopl ever go ian like
kid pizza alway hit lot great side dish option kiddo
servic perfect famili atmospher nice see
cook perfect servic impecc
one simpli disappoint
overall disappoint qualiti food bouchon
account know get screw
great place eat remind littl mom pop shop san francisco bay area
today first tast bulldogi gourmet hot dog tell ever thought possibl
left frustrat
definit soon
food realli good got full petti fast
servic fantast
total wast time
know kind bestice tea
come hungri leav happi stuf
servic give star
assur disappoint
take littl bad servic food suck
gave tri eat crust teeth still sore
complet gross
realli enjoy eat
first time go think quickli becom regular
server nice even though look littl overwhelm need stay profession friendli end
dinner companion told everyth fresh nice textur tast
ground right next tabl larg smear step track everywher pile green bird poop
furthermor even find hour oper websit
tri like place time think done
mistak
complaint
serious good pizza expert connaisseur topic
waiter jerk
strike want rush
nicest restaur owner ever come across
never come
love biscuit
servic quick friendli
order appet took minut pizza anoth minut
absolutley fantast
huge awkward lb piec cow th gristl fat
definit come back
like steiner dark feel like bar
wow spici delici
familiar check
take busi dinner dollar elsewher
love go back
anyway fs restaur wonder breakfast lunch
noth special
day week differ deal delici
mention combin pear almond bacon big winner
back
sauc tasteless
food delici spici enough sure ask spicier prefer way
ribey steak cook perfectli great mesquit flavor
think go back anytim soon
food gooodd
far sushi connoisseur definit tell differ good food bad food certainli bad food
insult

insulc
last time lunch bad
chicken wing contain driest chicken meat ever eaten
food good enjoy everi mouth enjoy relax venu coupl small famili group etc
nargil think great
best tater tot southwest
love place
definit worth paid
vanilla ice cream creami smooth profiterol choux pastri fresh enough
im az time new spot
manag worst
insid realli quit nice clean
food outstand price reason
think run back carli anytim soon food
due fact took minut acknowledg anoth minut get food kept forget thing
love margarita
first vega buffet disappoint
good though
one note ventil could use upgrad
great pork sandwich
wast time
total letdown would much rather go camelback flower shop cartel coffe
third chees friend burger cold
enjoy pizza brunch
steak well trim also perfectli cook
group claim would handl us beauti
love
ask bill leav without eat bring either
place jewel la vega exactli hope find nearli ten year live
seafood limit boil shrimp crab leg crab leg definit tast fresh
select food best
delici absolut back
small famili restaur fine dine establish
toro tartar cavier extraordinari like thinli slice wagyu white truffl
dont think back long time
attach ga station rare good sign
awesom
back mani time soon
menu much good stuff could decid
wors humili worker right front bunch horribl name call
conclus fill meal
daili special alway hit group
tragedi struck
pancak also realli good pretti larg
first crawfish experi delici
monster chicken fri steak egg time favorit
waitress sweet funni
also tast mom multi grain pumpkin pancak pecan butter amaz fluffi delici
rather eat airlin food serious
cant say enough good thing place
ambianc incred
waitress manag friendli
would recommend place
overall impress noca
gyro basic lettuc
terribl servic
thoroughli disappoint
much pasta love homemad hand made pasta thin pizza
give tri happi
far best cheesecurd ever
reason price also
everyth perfect night
food good typic bar food
drive get
first glanc love bakeri cafe nice ambianc clean friendli staff
anyway think go back
point finger item menu order disappoint
oh thing beauti restaur
gone go
greasi unhealthi meal
first time might last
burger amaz
similarli deliveri man say word analog food minut late

similarly deliver man say word apology 1000 minut late
way expens
sure order dessert even need pack go tiramisu cannoli die
first time wait next
bartend also nice
everyth good tasti
place two thumb way
best place vega breakfast check sat sun
love authent mexican food want whole bunch interest yet delici meat choos need tri place
terribl manag
excel new restaur experienc frenchman
zero star would give zero star
great steak great side great wine amaz dessert
worst martini ever
steak shrimp opinion best entre gc
opportun today sampl amaz pizza
wait thirti minut seat although vacant tabl folk wait
yellowtail carpaccio melt mouth fresh
tri go back even empti
go eat potato found stranger hair
spici enough perfect actual
last night second time dine happi decid go back
even hello right
dessert bit strang
boyfriend came first time recent trip vega could pleas qualiti food servic
realli recommend place go wrong donut place
nice ambianc
would recommend save room
guess mayb went night disgrac
howev recent experi particular locat good
know like restaur someth
avoid establish
think restaur suffer tri hard enough
tapa dish delici
heart place
salad bland vinegrett babi green heart palm
two felt disgust
good time
believ place great stop huge belli hanker sushi
gener portion great tast
never go back place never ever recommend place anyon
server went back forth sever time even much help
food delici
hour serious
consid theft
ew locat need complet overhaul
recent wit poor qualiti manag toward guest well
wait wait wait
also came back check us regularli excel servic
server super nice check us mani time
pizza tast old super chewi good way
swung give tri deepli disappoint
servic good compani better
staff also friendli effici
servic fan quick serv nice folk
boy sucker dri
rate
look authent thai food go els
steak recommend
pull car wait anoth minut acknowledg
great food great servic clean friendli set
assur back
hate thing much cheap qualiti black oliv
breakfast perpar great beauti present giant slice toast lightli dust powder sugar
kid play area nasti
great place fo take eat
waitress friendli happi accomod vegan veggi option
omg felt like never eaten thai food dish
extrem crumbi pretti tasteless
pale color instead nice char flavor
crouton also tast homemad extra plu
got home seedriest damn wing ever
regular stop trin phoenix

regular stop trip phoenix
realli enjoy crema caf expand even told friend best breakfast
good money
miss wish one philadelphia
got sit fairli fast end wait minut place order anoth minut food arriv
also best chees crisp town
good valu great food great servic
ask satisfi meal
food good
awesom
want leav
made drive way north scottsdal one bit disappoint
eat
owner realli realli need quit soooooo cheap let wrap freak sandwich two paper one
check place coupl year ago impress
chicken got definit reheate ok wedg cold soggi
sorri get food anytim soon
absolut must visit
cow tongu cheek taco amaz
friend like bloodi mari
despit hard rate busi actual rare give star
realli want make experi good one
return
chicken pho tast bland
disappoint
grill chicken tender yellow saffron season
drive thru mean want wait around half hour food somehow end go make us wait wait
pretti awesom place
ambienc perfect
best luck rudenon custom servic focus new manag
grandmoth make roast chicken better one
ask multipl time wine list time ignor went hostess got one
staff alway super friendli help espec cool bring two small boy babi
four star food guy blue shirt great vibe still let us eat
roast beef sandwich tast realli good
even drastic sick
high qualiti chicken chicken caesar salad
order burger rare came done
promptli greet seat
tri go lunch madhous
proven dead wrong sushi bar qualiti great servic fast food impecc
wait hour seat greatest mood
good joint
macaron insan good
eat
waiter attent friendli inform
mayb cold would somewhat edibl
place lot promis fail deliv
bad experi
mistak
food averag best
great food
go back anytim soon
disappoint order big bay plater
great place relax awesom burger beer
perfect sit famili meal get togeth friend
much flavor poorli construct
patio seat comfort
fri rice dri well
hand favorit italian restaur
scream legit book somethat also pretti rare vega
fun experi
atmospher great love duo violinist play song request
person love hummu pita baklava falafel baba ganoush amaz eggplant
conveni sinc stay mgm
owner super friendli staff courteou
great
eclect select
sweet potato tot good onion ring perfect close
staff attent
chef gener time even came around twice take pictur
owner use work nobu place realli similar half price
good mediocr imagin smashburg non

googl mediterr imagin smashburg pop
dont go
promis disappoint
sushi lover avoid place mean
great doubl cheeseburg
awesom servic food
fantast neighborhood gem
wait go back
plantain worst ever tast
great place highli recommend
servic slow attent
gave star give star
staff spend time talk
dessert panna cotta amaz
good food great atmospher
damn good steak
total brunch fail
price reason flavor spot sauc home made slaw drench mayo
decor nice piano music soundtrack pleasant
steak amaz rge fillet relleno best seafood plate ever
good food good servic
absolut amaz
probabl back honest
definit back
sergeant pepper beef sandwich auju sauc excel sandwich well
hawaiian breez mango magic pineappl delight smoothi tri far good
went lunch servic slow
much say place walk expect amaz quickli disappoint
mortifi
needless say never back
anyway food definit fill price pay expect
chip came drip greas mostli edibl
realli impress strip steak
go sinc everi meal awesom
server nice attent serv staff
cashier friendli even brought food
work hospit industri paradis valley refrain recommend cibo longer
atmospher fun
would recommend other
servic quick even go order like like
mean realli get famou fish chip terribl
said mouth belli still quit pleas
thing
thumb
read pleas go
love grill pizza remind legit italian pizza
pro larg seat area nice bar area great simpl drink menu best brick oven pizza homemad dou
gh
realli nice atmospher
tonight elk filet special suck
one bite hook
order old classic new dish go time sore disappoint everyth
cute quaint simpl honest
chicken delici season perfect fri outsid moist chicken insid
food great alway compliment chef
special thank dylan recommend order yummi tummi
awesom select beer
great food awesom servic
one nice thing ad gratuiti bill sinc parti larger expect tip
fli appl juic fli
han nan chicken also tasti
servic thought good
food bare lukewarm must sit wait server bring us
ryan bar definit one edinburgh establish revisit
nicest chines restaur
overal like food servic
also serv indian naan bread hummu spici pine nut sauc world
probabl never come back recommend
friend pasta also bad bare touch
tri airport experi tasti food speedi friendli servic
love decor chines calligraphi wall paper
never anythcomplain
restaur clean famili restaur feel

restaurant clean family restaurant feel
way fri
sure long stood long enough begin feel awkwardli place
open sandwich impress good way
back
warm feel servic felt like guest special treat
extens menu provid lot option breakfast
always order vegetarian menu dinner wide array option choos
watch price inflat portion get smaller manag attitud grow rapidli
wonder lil tapa ambienc made feel warm fuzzi insid
got enjoy seafood salad fabul vinegrett
wonton thin thick chewi almost melt mouth
level spici perfect spice whelm soup
sat right time server get go fantast
main thing enjoy crowd older crowd around mid
side town definit spot hit
wait minut get drink longer get arepa
great place eat
jalapeno bacon soooo good
servic poor that nice
food good servic good price good
place clean food oh stale
chicken dish ok beef like shoe leather
servic beyond bad
happi
tast like dirt
one place phoenix would defin go back
block amaz
close hous low key non fanci afford price good food
hot sour egg flower soup absolut star
sashimi poor qualiti soggi tasteless
great time famili dinner sunday night
food tasti say real tradit hunan style
bother slow servic
flair bartend absolut amaz
frozen margarita way sugari tast
good order twice
nutshel restaraunt smell like combin dirti fish market sewer
girlfriend veal bad
unfortun good
pretti satifi experi
join club get awesom offer via email
perfect someon like beer ice cold case even colder
bland flavorless good way describ bare tepid meat
chain fan beat place easili
nacho must
come back
mani word say place everyth pretti well
staff super nice quick even crazi crowd downtown juri lawyer court staff
great atmospher friendli fast servic
receiv pita huge lot meat thumb
food arriv meh
pay hot dog fri look like came kid meal wienerschnitzel idea good meal
classic main lobster roll fantast
brother law work mall ate day guess sick night
good go review place twice herea tribut place tribut event held last night
chip salsa realli good salsa fresh
place great
mediocr food
get insid impress place
super pissd
servic super friendli
sad littl veget overcook
place nice surpris
golden crispi delici
high hope place sinc burger cook charcoal grill unfortun tast fell flat way flat
could eat bruschetta day devin
singl employe came see ok even need water refil final serv us food
lastli mozzarella stick best thing order
first time ever came amaz experi still tell peopl awesom duck
server neglig need made us feel unwelcom would suggest place
servic terribl though
place overpr consist beba realli overpr

place overpr consist boba realli overpr
pack
love place
say dessert yummi
food terribl
season fruit fresh white peach pure
kept get wors wors offici done
place honestli blown
definit would eat
wast money
love put food nice plastic contain oppos cram littl paper takeout box
cr pe delic thin moist
aw servic
ever go
food qualiti horribl
price think place would much rather gone
servic fair best
love sushi found kabuki price hip servic
favor stay away dish
poor servic
one tabl thought food averag worth wait
best servic food ever maria server good friendli made day
excel
paid bill tip felt server terribl job
lunch great experi
never bland food surpris consid articl read focus much spice flavor
food way overpr portion fuck small
recent tri caballero back everi week sinc
buck head realli expect better food
food came goodpace
ate twice last visit especí enjoy salmon salad
back
could believ dirti oyster
place deserv star
would recommend place
fact go round star awesom
disbelief dish qualifi worst version food ever tast
bad day low toler rude custom servic peopl job nice polit wash dish otherwis
potato great biscuit
probabl would go
flavor perfect amount heat
price reason servic great
wife hate meal coconut shrimp friend realli enjoy meal either
fella got huevo ranchero look appeal
went happi hour great list wine
may say buffet pricey think get pay place get quit lot
probabl come back
worst food servic
place pretti good nice littl vibe restaur
talk great custom servic cours back
hot dish hot cold dish close room temp watch staff prepar food bare hand glove everyth de
ep fri oil
love fri bean
always pleasur deal
plethora salad sandwich everyth tri get seal approv
place awesom want someth light healthi summer
sushi strip place go
servic great even manag came help tabl
feel dine room colleg cook cours high class dine servic slow best
start review two star edit give one
worst sushi ever eat besid costco
excel restaur highlight great servic uniqu menu beauti set
boyfriend sat bar complet delight experi
weird vibe owner
hardli meat
better bagel groceri store
go place gyro
love owner chef one authent japanes cool dude
burger good pizza use amaz doughi flavorless
found six inch long piec wire salsa
servic terribl food mediocr
defin enjoy
order albondiga soup warm tast like tomato soup frozen meatball

order albondiga soup warm east like tomato soup frozen meatball
three differ occas ask well done medium well three time got bloodiest piec meat plate
two bite refus eat anymor
servic extrem slow
minut wait got tabl
serious killer hot chai latt
allergi warn menu waitress absolut clue meal contain peanut
boyfriend tri mediterranean chicken salad fell love
rotat beer tap also highlight place
price bit concern mellow mushroom
worst thai ever
stay vega must get breakfast least
want first say server great perfect servic
pizza select good
strawberri tea good
highli unprofession rude loyal patron
overall great experi
spend money elsewher
regular toast bread equal satisfi occasion pat butter mmmmm
buffet bellagio far anticip
drink weak peopl
order correct
also feel like chip bought made hous
disappoint dinner went elsewher dessert
chip sal amaz
return
new fav vega buffet spot
serious cannot believ owner mani unexperienc employe run around like chicken head cut
sad
felt insult disrespect could talk judg anoth human like
call steakhous properli cook steak understand
impress concept food
thing crazi guacamol like pur ed
realli noth postino hope experi better
got food poison buffet
brought fresh batch fri think yay someth warm
hilari yummi christma eve dinner rememb biggest fail entir trip us
needless say go back anytim soon
place disgust
everi time eat see care teamwork profession degre
ri style calamari joke
howev much garlic fondu bare edibl
could bare stomach meal complain busi lunch
bad lost heart finish
also took forev bring us check ask
one make scene restaur get definit lost love one
disappoint experi
food par denni say good
want wait mediocr food downright terribl servic place
waaaaaayyyyyyyyyyi rate say
go back
place fairli clean food simpli worth
place lack style
sangria half glass wine full ridicul
bother come
meat pretti dri slice brisket pull pork
build seem pretti neat bathroom pretti trippi eat
equal aw
probabl hurri go back
slow seat even reserv
good stretch imagin
cashew cream sauc bland veget undercook
chipolt ranch dip saus tasteless seem thin water heat
bit sweet realli spici enough lack flavor
disappoint
place horribl way overpr
mayb vegetarian fare twice thought averag best
busi know
tabl outsid also dirti lot time worker alway friendli help menu
ambianc feel like buffet set douchey indoor garden tea biscuit
con spotti servic
fri hot neither burger
came back cold

came back cold
food came disappoint ensu
real disappoint waiter
husband said rude even apolog bad food anyth
reason eat would fill night bing drink get carb stomach
insult profound deuchebaggeri go outsid smoke break serv solidifi
someon order two taco think may part custom servic ask combo ala cart
quit disappoint although blame need place door
rave review wait eat disappoint
del taco pretti nasti avoid possibl
hard make decent hamburg
like
hell go back
gotten much better servic pizza place next door servic receiv restaur
know big deal place back ya
immedi said want talk manag want talk guy shot firebal behind bar
ambianc much better
unfortun set us disapppoint entre
food good
server suck wait correct server heimer suck
happen next pretti put
bad caus know famili own realli want like place
overpr get
vomit bathroom mid lunch
kept look time soon becom minut yet still food
place eat circumst would ever return top list
start tuna sashimi brownish color obvious fresh
food averag
sure beat nacho movi would expect littl bit come restaur
ha long bay bit flop
problem charg sandwich bigger subway sub offer better amount veget
shrimp unwrap live mile brushfir liter ice cold
lack flavor seem undercook dri
realli impress place close
would avoid place stay mirag
refri bean came meal dri crusti food bland
spend money time place els
ladi tabl next us found live green caterpillar salad
present food aw
tell disappoint
think food flavor textur lack
appetit instantli gone
overall impress would go back
whole experi underwhelm think go ninja sushi next time
wast enough life pour salt wound draw time took bring check

In [28]:

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corpus
```

Out[28]:

```
['wow love place',  
'crust good',  
'tasti textur nasti',  
'stop late may bank holiday rick steve recommend love',  
'select menu great price',  
'get angri want damn pho',  
'honeslti tast fresh',  
'potato like rubber could tell made ahead time kept warmer',  
'fri great',  
'great touch',  
'servic prompt',  
'would go back',  
'cashier care ever say still end wayyy overpr',  
'tri cape cod ravoli chicken cranberri mmmmm',  
'disgust pretti sure human hair',  
'shock sign indic cash',  
'highli recommend',  
'waitress littl slow servic',  
'place worth time let alon vega',  
'like',  
'burritto blah',
```

'food amaz',
'servic also cute',
'could care less interior beauti',
'perform',
'right red velvet cake ohhh stuff good',
'never brought salad ask',
'hole wall great mexican street taco friendli staff',
'took hour get food tabl restaur food luke warm sever run around like total overwhelm',
'worst salmon sashimi',
'also combo like burger fri beer decent deal',
'like final blow',
'found place accid could happier',
'seem like good quick place grab bite familiar pub food favor look elsewher',
'overall like place lot',
'redeem qualiti restaur inexpens',
'ampl portion good price',
'poor servic waiter made feel like stupid everi time came tabl',
'first visit hiro delight',
'servic suck',
'shrimp tender moist',
'deal good enough would drag establish',
'hard judg whether side good gross melt styrofoam want eat fear get sick',
'posit note server attent provid great servic',
'frozen puck disgust worst peopl behind regist',
'thing like prime rib dessert section',
'bad food damn gener',
'burger good beef cook right',
'want sandwich go firehous',
'side greek salad greek dress tasti pita hummu refresh',
'order duck rare pink tender insid nice char outsid',
'came run us realiz husband left sunglass tabl',
'chow mein good',
'horribl attitud toward custom talk one custom enjoy food',
'portion huge',
'love friendli server great food wonder imagin menu',
'heart attack grill downtown vega absolut flat line excus restaur',
'much seafood like string pasta bottom',
'salad right amount sauc power scallop perfectli cook',
'rip banana rip petrifi tasteless',
'least think refil water struggl wave minut',
'place receiv star appet',
'cocktail handmad delici',
'definit go back',
'glad found place',
'great food servic huge portion give militari discount',
'alway great time do gringo',
'updat went back second time still amaz',
'got food appar never heard salt batter fish chewi',
'great way finish great',
'deal includ tast drink jeff went beyond expect',
'realli realli good rice time',
'servic meh',
'took min get milkshak noth chocol milk',
'guess known place would suck insid excalibur use common sens',
'scallop dish quit appal valu well',
'time bad custom servic',
'sweet potato fri good season well',
'today second time lunch buffet pretti good',
'much good food vega feel cheat wast eat opportun go rice compani',
'come like experienc underwhelm relationship parti wait person ask break',
'walk place smell like old greas trap other eat',
'turkey roast beef bland',
'place',
'pan cake everyon rave tast like sugari disast tailor palat six year old',
'love pho spring roll oh yummi tri',
'poor batter meat ratio made chicken tender unsatisfi',
'say food amaz',
'omelet die',
'everyth fresh delici',
'summari larg disappoint dine experi',
'like realli sexi parti mouth outrag flirt hottest person parti',
'never hardrock casino never ever step forward',

'best breakfast buffet',
'say bye bye tip ladi',
'never go',
'back',
'food arriv quickli',
'good',
'side cafe serv realli good food',
'server fantast found wife love roast garlic bone marrow ad extra meal anoth marrow go',
'good thing waiter help kept bloddi mari come',
'best buffet town price cannot beat',
'love mussel cook wine reduct duck tender potato dish delici',
'one better buffet',
'went tigerlilli fantast afternoon',
'food delici bartend attent person got great deal',
'ambienc wonder music play',
'go back next trip',
'sooooo good',
'real sushi lover let honest yama good',
'least min pass us order food arriv busi',
'realli fantast thai restaur definit worth visit',
'nice spici tender',
'good price',
'check',
'pretti gross',
'better atmospher',
'kind hard mess steak',
'although much like look sound place actual experi bit disappoint',
'know place manag serv blandest food ever eaten prepar indian cuisin',
'worst servic boot least worri',
'servic fine waitress friendli',
'guy steak steak love son steak best worst place said best steak ever eaten',
'thought ventur away get good sushi place realli hit spot night',
'host staff lack better word bitch',
'bland like place number reason want wast time bad review leav',
'phenomen food servic ambianc',
'return',
'definit worth ventur strip pork belli return next time vega',
'place way overpr mediocr food',
'penn vodka excel',
'good select food includ massiv meatloaf sandwich crispi chicken wrap delish tuna melt t
asti burger',
'manag rude',
'delici nyc bagel good select cream chees real lox caper even',
'great subway fact good come everi subway meet expect',
'serious solid breakfast',
'one best bar food vega',
'extrem rude realli mani restaur would love dine weekend vega',
'drink never empti made realli great menu suggest',
'',
'waiter help friendli rare check us',
'husband ate lunch disappoint food servic',
'red curri much bamboo shoot tasti',
'nice blanket moz top feel like done cover subpar food',
'bathroom clean place well decor',
'menu alway chang food qualiti go servic extrem slow',
'servic littl slow consid serv peopl server food come slow pace',
'give thumb',
'watch waiter pay lot attent tabl ignor us',
'fianc came middl day greet seat right away',
'great restaur mandalay bay',
'wait forti five minut vain',
'crostini came salad stale',
'highlight great qualiti nigiri',
'staff friendli joint alway clean',
'differ cut piec day still wonder tender well well flavor',
'order voodoo pasta first time realli excel pasta sinc go gluten free sever year ago',
'place good',
'unfortun must hit bakeri leftov day everyth order stale',
'came back today sinc reloc still impress',
'seat immedi',
'menu divers reason price',
'avoid cost',

'restaur alway full never wait',
'delici',
'place hand one best place eat phoenix metro area',
'go look good food',
'never treat bad',
'bacon hella salti',
'also order spinach avocado salad ingredi sad dress liter zero tast',
'realli vega fine dine use right menu hand ladi price list',
'waitress friendli',
'lordi khao soi dish miss curri lover',
'everyth menu terrif also thrill made amaz accommod vegetarian daughter',
'perhap caught night judg review inspir go back',
'servic leav lot desir',
'atmospher modern hip maintain touch cozi',
'weekli haunt definit place come back everi',
'liter sat minut one ask take order',
'burger absolut flavor meat total bland burger overcook charcoal flavor',
'also decid send back waitress look like verg heart attack',
'dress treat rude',
'probabl dirt',
'love place hit spot want someth healthi lack quantiti flavor',
'order lemon raspberri ice cocktail also incred',
'food suck expect suck could imagin',
'interest decor',
'realli like crepe station',
'also serv hot bread butter home made potato chip bacon bit top origin good',
'watch prepar delici food',
'egg roll fantast',
'order arriv one gyro miss',
'salad wing ice cream dessert left feel quit satisfi',
'realli sure joey vote best hot dog valley reader phoenix magazin',
'best place go tasti bowl pho',
'live music friday total blow',
'never insult felt disrespect',
'friendli staff',
'worth drive',
'heard good thing place exceed everi hope could dream',
'food great serivc',
'warm beer help',
'great brunch spot',
'servic friendli invit',
'good lunch spot',
'live sinc first last time step foot place',
'worst experi ever',
'must night place',
'side delish mix mushroom yukon gold pure white corn beateou',
'bug never show would given sure side wall bug climb kitchen',
'minut wait salad realiz come time soon',
'friend love salmon tartar',
'go back',
'extrem tasti',
'waitress good though',
'soggi good',
'jamaican mojito delici',
'small worth price',
'food rich order accordngli',
'shower area outsid rins take full shower unless mind nude everyon see',
'servic bit lack',
'lobster bisqu bussel sprout risotto filet need salt pepper cours none tabl',
'hope bode go busi someon cook come',
'either cold enough flavor bad',
'love bacon wrap date',
'unbeliev bargain',
'folk otto alway make us feel welcom special',
'main also uninspir',
'place first pho amaz',
'wonder experi made place must stop whenev town',
'food bad enough enjoy deal world worst annoy drunk peopl',
'fun chef',
'order doubl cheeseburg got singl patti fall apart pictur upload yeah still suck',
'great place coupl drink watch sport event wall cover tv',
'possibl give zero star',

'descript said yum yum sauc anoth said eel sauc yet anoth said spici mayo well none roll
sauc',
'say would hardest decis honestli dish tast suppos tast amaz',
'roll eye may stay sure go back tri',
'everyon attent provid excel custom servic',
'horribl wast time money',
'dish quit flavour',
'time side restaur almost empti excus',
'busi either also build freez cold',
'like review said pay eat place',
'drink took close minut come one point',
'serious flavor delight folk',
'much better ayc sushi place went vega',
'light dark enough set mood',
'base sub par servic receiv effort show gratitud busi go back',
'owner realli great peopl',
'noth privileg work eat',
'greek dress creami flavor',
'overall think would take parent place made similar complaint silent felt',
'pizza good peanut sauc tasti',
'tabl servic pretti fast',
'fantast servic',
'well would given godfath zero star possibl',
'know make',
'tough short flavor',
'hope place stick around',
'bar vega ever recal charg tap water',
'restaur atmospher exquisit',
'good servic clean inexpens boot',
'seafood fresh gener portion',
'plu buck',
'servic par either',
'thu far visit twice food absolut delici time',
'good year ago',
'self proclaim coffe cafe wildli disappoint',
'veggitarian platter world',
'cant go wrong food',
'beat',
'stop place madison ironman friendli kind staff',
'chef friendli good job',
'better dedic boba tea spot even jenni pho',
'like patio servic outstand',
'goat taco skimp meat wow flavor',
'think',
'mac salad pretti bland get',
'went bachi burger friend recommend disappoint',
'servic stink',
'wait wait',
'place qualiti sushi qualiti restaur',
'would definit recommend wing well pizza',
'great pizza salad',
'thing went wrong burn saganaki',
'wait hour breakfast could done time better home',
'place amaz',
'hate disagre fellow yelper husband disappoint place',
'wait hour never got either pizza mani around us came later',
'know slow',
'staff great food delish incred beer select',
'live neighborhood disappoint back conveni locat',
'know pull pork could soooo delici',
'get incred fresh fish prepar care',
'go gave star rate pleas know third time eat bachi burger write review',
'love fact everyth menu worth',
'never dine place',
'food excel servic good',
'good beer drink select good food select',
'pleas stay away shrimp stir fri noodl',
'potato chip order sad could probabl count mani chip box probabl around',
'food realli bore',
'good servic check',
'greedi corpor never see anoth dime',
'never ever go back',

'much like go back get pass atroci servic never return',
'summer dine charm outdoor patio delight',
'expect good',
'fantast food',
'order toast english muffin came untoast',
'food good',
'never go back',
'great food price high qualiti hous made',
'bu boy hand rude',
'point friend basic figur place joke mind make publicli loudli known',
'back good bbq lighter fare reason price tell public back old way',
'consid two us left full happi go wrong',
'bread made hous',
'downsid servic',
'also fri without doubt worst fri ever',
'servic except food good review',
'coupl month later return amaz meal',
'favorit place town shawarrrrrrma',
'black eye pea sweet potato unreal',
'disappoint',
'could serv vinaigrett may make better overal dish still good',
'go far mani place never seen restaur serv egg breakfast espec',
'mom got home immedi got sick bite salad',
'server pleasant deal alway honor pizza hut coupon',
'truli unbeliev good glad went back',
'fantast servic pleas atmospher',
'everyth gross',
'love place',
'great servic food',
'first bathroom locat dirti seat cover replenish plain yucki',
'burger got gold standard burger kind disappoint',
'omg food delicioso',
'noth authent place',
'spaghetti noth special whatsoev',
'dish salmon best great',
'veget fresh sauc feel like authent thai',
'worth drive tucson',
'select probabl worst seen vega none',
'pretti good beer select',
'place like chipotl better',
'classi warm atmospher fun fresh appet succul steak basebal steak',
'star brick oven bread app',
'eaten multipl time time food delici',
'sat anoth ten minut final gave left',
'terribl',
'everyon treat equal special',
'take min pancak egg',
'delici',
'good side staff genuin pleasant enthusiast real treat',
'sadli gordon ramsey steak place shall sharpli avoid next trip vega',
'alway even wonder food delici',
'best fish ever life',
'bathroom next door nice',
'buffet small food offer bland',
'outstand littl restaur best food ever tast',
'pretti cool would say',
'definit turn doubt back unless someon els buy',
'server great job handl larg rowdi tabl',
'find wast food desp'ic food',
'wife lobster bisqu soup lukewarm',
'would come back sushi crave vega',
'staff great ambianc great',
'deserv star',
'left stomach ach felt sick rest day',
'drop ball',
'dine space tini elegantli decor comfort',
'custom order way like usual eggplant green bean stir fri love',
'bean rice mediocr best',
'best taco town far',
'took back money got outta',
'interest part town place amaz',
'rude inconsider manag',

'staff friendli wait time serv horribl one even say hi first minut',
'back',
'great dinner',
'servic outshin definit recommend halibut',
'food terribl',
'never ever go back told mani peopl happen',
'recommend unless car break front starv',
'come back everi time vega',
'place deserv one star food',
'disgrac',
'def come back bowl next time',
'want healthi authent ethic food tri place',
'continu come ladi night andddd date night highli recommend place anyon area',
'sever time past experi alway great',
'walk away stuf happi first vega buffet experi',
'servic excel price pretti reason consid vega locat insid crystal shop mall aria',
'summar food incred nay transcend noth bring joy quit like memori pneumat condiment disp
ens',
'probabl one peopl ever go ian like',
'kid pizza alway hit lot great side dish option kiddo',
'servic perfect famili atmospher nice see',
'cook perfect servic impecc',
'one simpli disappoint',
'overall disappoint qualiti food bouchon',
'account know get screw',
'great place eat remind littl mom pop shop san francisco bay area',
'today first tast buldogi gourmet hot dog tell ever thought possibl',
'left frustrat',
'definit soon',
'food realli good got full petti fast',
'servic fantast',
'total wast time',
'know kind best ice tea',
'come hungri leav happi stuf',
'servic give star',
'assur disappoint',
'take littl bad servic food suck',
'gave tri eat crust teeth still sore',
'complet gross',
'realli enjoy eat',
'first time go think quickli becom regular',
'server nice even though look littl overwhelm need stay profession friendli end',
'dinner companion told everyth fresh nice textur tast',
'ground right next tabl larg smear step track everywher pile green bird poop',
'furthermor even find hour oper websit',
'tri like place time think done',
'mistak',
'complaint',
'serious good pizza expert connisseur topic',
'waiter jerk',
'strike want rush',
'nicest restaur owner ever come across',
'never come',
'love biscuit',
'servic quick friendli',
'order appet took minut pizza anoth minut',
'absolutley fantast',
'huge awkward lb piec cow th gristl fat',
'definit come back',
'like steiner dark feel like bar',
'wow spici delici',
'familiar check',
'take busi dinner dollar elsewher',
'love go back',
'anyway fs restaur wonder breakfast lunch',
'noth special',
'day week differ deal delici',
'mention combin pear almond bacon big winner',
'back',
'sauc tasteless',
'food delici spici enough sure ask spicier prefer way',
'ribey steak cook perfectli great mesquit flavor',

'think go back anytim soon',
'food gooodd',
'far sushi connoisseur definit tell differ good food bad food certainli bad food',
'insult',
'last time lunch bad',
'chicken wing contain driest chicken meat ever eaten',
'food good enjoy everi mouth enjoy relax venu coupl small famili group etc',
'nargil think great',
'best tater tot southwest',
'love place',
'definit worth paid',
'vanilla ice cream creami smooth profiterol choux pastri fresh enough',
'im az time new spot',
'manag worst',
'insid realli quit nice clean',
'food outstand price reason',
'think run back carli anytim soon food',
'due fact took minut acknowledg anoth minut get food kept forget thing',
'love margarita',
'first vega buffet disappoint',
'good though',
'one note ventil could use upgrad',
'great pork sandwich',
'wast time',
'total letdown would much rather go camelback flower shop cartel coffe',
'third chees friend burger cold',
'enjoy pizza brunch',
'steak well trim also perfectli cook',
'group claim would handl us beauti',
'love',
'ask bill leav without eat bring either',
'place jewel la vega exactli hope find nearli ten year live',
'seafood limit boil shrimp crab leg crab leg definit tast fresh',
'select food best',
'delici absolut back',
'small famili restaur fine dine establish',
'toro tartar cavier extraordinari like thinli slice wagyu white truffl',
'dont think back long time',
'attach ga station rare good sign',
'awesom',
'back mani time soon',
'menu much good stuff could decid',
'wors humili worker right front bunch horribl name call',
'conclus fill meal',
'daili special alway hit group',
'tragedi struck',
'pancak also realli good pretti larg',
'first crawfish experi delici',
'monster chicken fri steak egg time favorit',
'waitress sweet funni',
'also tast mom multi grain pumpkin pancak pecan butter amaz fluffi delici',
'rather eat airlin food serious',
'cant say enough good thing place',
'ambianc incred',
'waitress manag friendli',
'would recommend place',
'overall impress noca',
'gyro basic lettuc',
'terribl servic',
'thoroughli disappoint',
'much pasta love homemad hand made pasta thin pizza',
'give tri happi',
'far best cheesecurd ever',
'reason price also',
'everyth perfect night',
'food good typic bar food',
'drive get',
'first glanc love bakeri cafe nice ambianc clean friendli staff',
'anyway think go back',
'point finger item menu order disappoint',
'oh thing beauti restaur',
'gone go',

'greasi unhealthi meal',
'first time might last',
'burger amaz',
'similarli deliveri man say word apolog food minut late',
'way expens',
'sure order dessert even need pack go tiramisu cannoli die',
'first time wait next',
'bartend also nice',
'everyth good tasti',
'place two thumb way',
'best place vega breakfast check sat sun',
'love authent mexican food want whole bunch interest yet delici meat choos need tri plac
e',
'terribl manag',
'excel new restaur experienc frenchman',
'zero star would give zero star',
'great steak great side great wine amaz dessert',
'worst martini ever',
'steak shrimp opinion best entre gc',
'opportun today sampl amaz pizza',
'wait thirti minut seat although vacant tabl folk wait',
'yellowtail carpaccio melt mouth fresh',
'tri go back even empti',
'go eat potato found stranger hair',
'spici enough perfect actual',
'last night second time dine happi decid go back',
'even hello right',
'dessert bit strang',
'boyfriend came first time recent trip vega could pleas qualiti food servic',
'realli recommend place go wrong donut place',
'nice ambianc',
'would recommend save room',
'guess mayb went night disgrac',
'howev recent experi particular locat good',
'know like restaur someth',
'avoid establish',
'think restaur suffer tri hard enough',
'tapa dish delici',
'heart place',
'salad bland vinegrett babi green heart palm',
'two felt disgust',
'good time',
'believ place great stop huge belli hanker sushi',
'gener portion great tast',
'never go back place never ever recommend place anyon',
'server went back forth sever time even much help',
'food delici',
'hour serious',
'consid theft',
'eew locat need complet overhaul',
'recent wit poor qualiti manag toward guest well',
'wait wait wait',
'also came back check us regularli excel servic',
'server super nice check us mani time',
'pizza tast old super chewi good way',
'swung give tri deepli disappoint',
'servic good compani better',
'staff also friendli effici',
'servic fan quick serv nice folk',
'boy sucker dri',
'rate',
'look authent thai food go els',
'steak recommend',
'pull car wait anoth minut acknowledg',
'great food great servic clean friendli set',
'assur back',
'hate thing much cheap qualiti black oliv',
'breakfast perpar great beauti present giant slice toast lightli dust powder sugar',
'kid play area nasti',
'great place fo take eat',
'waitress friendli happi accomod vegan veggi option',
'omg felt like never eaten thai food dish',

'extrem crumbi pretti tasteless',
'pale color instead nice char flavor',
'crouton also tast homemad extra plu',
'got home see driest damn wing ever',
'regular stop trip phoenix',
'realli enjoy crema caf expand even told friend best breakfast',
'good money',
'miss wish one philadelphia',
'got sit fairli fast end wait minut place order anoth minut food arriv',
'also best chees crisp town',
'good valu great food great servic',
'ask satisfi meal',
'food good',
'awesom',
'want leav',
'made drive way north scottsdal one bit disappoint',
'eat',
'owner realli realli need quit soooooo cheap let wrap freak sandwich two paper one',
'check place coupl year ago impress',
'chicken got definit reheate ok wedg cold soggi',
'sorri get food anytim soon',
'absolut must visit',
'cow tongu cheek taco amaz',
'friend like bloodi mari',
'despit hard rate busi actual rare give star',
'realli want make experi good one',
'return',
'chicken pho tast bland',
'disappoint',
'grill chicken tender yellow saffron season',
'drive thru mean want wait around half hour food somehow end go make us wait wait',
'pretti awesom place',
'ambien perfect',
'best luck rude non custom servic focus new manag',
'grandmoth make roast chicken better one',
'ask multipl time wine list time ignor went hostess got one',
'staff alway super friendli help espec cool bring two small boy babi',
'four star food guy blue shirt great vibe still let us eat',
'roast beef sandwich tast realli good',
'even drastic sick',
'high qualiti chicken chicken caesar salad',
'order burger rare came done',
'promptli greet seat',
'tri go lunch madhous',
'proven dead wrong sushi bar qualiti great servic fast food impecc',
'wait hour seat greatest mood',
'good joint',
'macaron insan good',
'eat',
'waiter attent friendli inform',
'mayb cold would somewhat edibl',
'place lot promis fail deliv',
'bad experi',
'mistak',
'food averag best',
'great food',
'go back anytim soon',
'disappoint order big bay plater',
'great place relax awesom burger beer',
'perfect sit famili meal get togeth friend',
'much flavor poorli construct',
'patio seat comfort',
'fri rice dri well',
'hand favorit italian restaur',
'scream legit book somethat also pretti rare vega',
'fun experi',
'atmospher great love duo violinist play song request',
'person love hummu pita baklava falafel baba ganoush amaz eggplant',
'conveni sinc stay mgm',
'owner super friendli staff courteou',
'great',
'eclect select',

'sweet potato tot good onion ring perfect close',
'staff attent',
'chef gener time even came around twice take pictur',
'owner use work nobu place realli similar half price',
'googl mediocr imagin smashburg pop',
'dont go',
'promis disappoint',
'sushi lover avoid place mean',
'great doubl cheeseburg',
'awesom servic food',
'fantast neighborhood gem',
'wait go back',
'plantain worst ever tast',
'great place highli recommend',
'servic slow attent',
'gave star give star',
'staff spend time talk',
'dessert panna cotta amaz',
'good food great atmospher',
'damn good steak',
'total brunch fail',
'price reason flavor spot sauc home made slaw drench mayo',
'decor nice piano music soundtrack pleasant',
'steak amaz rge fillet relleno best seafood plate ever',
'good food good servic',
'absolut amaz',
'probabl back honest',
'definit back',
'sergeant pepper beef sandwich auju sauc excel sandwich well',
'hawaiian breez mango magic pineappl delight smoothi tri far good',
'went lunch servic slow',
'much say place walk expect amaz quickli disappoint',
'mortifi',
'needless say never back',
'anyway food definit fill price pay expect',
'chip came drip greas mostli edibl',
'realli impress strip steak',
'go sinc everi meal awesom',
'server nice attent serv staff',
'cashier friendli even brought food',
'work hospit industri paradis valley refrain recommend cibo longer',
'atmospher fun',
'would recommend other',
'servic quick even go order like like',
'mean realli get famou fish chip terribl',
'said mouth belli still quit pleas',
'thing',
'thumb',
'read pleas go',
'love grill pizza remind legit italian pizza',
'pro larg seat area nice bar area great simpl drink menu best brick oven pizza homemad d
ough',
'realli nice atmospher',
'tonight elk filet special suck',
'one bite hook',
'order old classic new dish go time sore disappoint everyth',
'cute quaint simpl honest',
'chicken delici season perfect fri outsid moist chicken insid',
'food great alway compliment chef',
'special thank dylan recommend order yummi tummi',
'awesom select beer',
'great food awesom servic',
'one nice thing ad gratuiti bill sinc parti larger expect tip',
'fli appl juic fli',
'han nan chicken also tasti',
'servic thought good',
'food bare lukewarm must sit wait server bring us',
'ryan bar definit one edinburgh establish revisit',
'nicest chines restaur',
'overal like food servic',
'also servindian naan bread hummu spici pine nut sauc world',
'probabl never come back recommend',

'friend pasta also bad bare touch',
'tri airport experi tasti food speedi friendli servic',
'love decor chines calligraphi wall paper',
'never anyth complain',
'restaur clean famili restaur feel',
'way fri',
'sure long stood long enough begin feel awkwardli place',
'open sandwich impress good way',
'back',
'warm feel servic felt like guest special treat',
'extens menu provid lot option breakfast',
'always order vegetarian menu dinner wide array option choos',
'watch price inflat portion get smaller manag attitud grow rapidli',
'wonder lil tapa ambienc made feel warm fuzzi insid',
'got enjoy seafood salad fabul vinegrett',
'wonton thin thick chewi almost melt mouth',
'level spici perfect spice whelm soup',
'sat right time server get go fantast',
'main thing enjoy crowd older crowd around mid',
'side town definit spot hit',
'wait minut get drink longer get arepa',
'great place eat',
'jalapeno bacon soooo good',
'servic poor that nice',
'food good servic good price good',
'place clean food oh stale',
'chicken dish ok beef like shoe leather',
'servic beyond bad',
'happi',
'tast like dirt',
'one place phoenix would defin go back',
'block amaz',
'close hous low key non fanci afford price good food',
'hot sour egg flower soup absolut star',
'sashimi poor qualiti soggi tasteless',
'great time famili dinner sunday night',
'food tasti say real tradit hunan style',
'bother slow servic',
'flair bartend absolut amaz',
'frozen margarita way sugari tast',
'good order twice',
'nutshel restaraunt smell like combin dirti fish market sewer',
'girlfriend veal bad',
'unfortun good',
'pretti satifi experi',
'join club get awesom offer via email',
'perfect someon like beer ice cold case even colder',
'bland flavorless good way describ bare tepid meat',
'chain fan beat place easili',
'nacho must',
'come back',
'mani word say place everyth pretti well',
'staff super nice quick even crazi crowd downtown juri lawyer court staff',
'great atmospher friendli fast servic',
'receiv pita huge lot meat thumb',
'food arriv meh',
'pay hot dog fri look like came kid meal wienerschnitzel idea good meal',
'classic main lobster roll fantast',
'brother law work mall ate day guess sick night',
'good go review place twice herea tribut place tribut event held last night',
'chip salsa realli good salsa fresh',
'place great',
'mediocr food',
'get insid impress place',
'super pissd',
'servic super friendli',
'sad littl veget overcook',
'place nice surpris',
'golden crispy delici',
'high hope place sinc burger cook charcoal grill unfortun tast fell flat way flat',
'could eat bruschetta day devin',
'singl employe came see ok even need water refil final serv us food',

'lastli mozzarella stick best thing order',
'first time ever came amaz experi still tell peopl awesom duck',
'server neglig need made us feel unwelcom would suggest place',
'servic terribl though',
'place overpr consist boba realli overpr',
'pack',
'love place',
'say dessert yummi',
'food terribl',
'season fruit fresh white peach pure',
'kept get wors wors offici done',
'place honestli blown',
'definit would eat',
'wast money',
'love put food nice plastic contain oppos cram littl paper takeout box',
'cr pe delic thin moist',
'aw servic',
'ever go',
'food qualiti horribl',
'price think place would much rather gone',
'servic fair best',
'love sushi found kabuki price hip servic',
'favor stay away dish',
'poor servic',
'one tabl thought food averag worth wait',
'best servic food ever maria server good friendli made day',
'excel',
'paid bill tip felt server terribl job',
'lunch great experi',
'never bland food surpris consid articl read focus much spice flavor',
'food way overpr portion fuck small',
'recent tri caballero back everi week sinc',
'buck head realli expect better food',
'food came good pace',
'ate twice last visit especí enjoy salmon salad',
'back',
'could believ dirti oyster',
'place deserv star',
'would recommend place',
'fact go round star awesom',
'disbelief dish qualifi worst version food ever tast',
'bad day low toler rude custom servic peopl job nice polit wash dish otherwis',
'potato great biscuit',
'probabl would go',
'flavor perfect amount heat',
'price reason servic great',
'wife hate meal coconut shrimp friend realli enjoy meal either',
'fella got huevo ranchero look appeal',
'went happi hour great list wine',
'may say buffet pricey think get pay place get quit lot',
'probabl come back',
'worst food servic',
'place pretti good nice littl vibe restaur',
'talk great custom servic cours back',
'hot dish hot cold dish close room temp watch staff prepar food bare hand glove everyth
deep fri oil',
'love fri bean',
'alway pleasur deal',
'plethora salad sandwich everyth tri get seal approv',
'place awesom want someth light healthi summer',
'sushi strip place go',
'servic great even manag came help tabl',
'feel dine room colleg cook cours high class dine servic slow best',
'start review two star edit give one',
'worst sushi ever eat besid costco',
'excel restaur highlight great servic uniqu menu beauti set',
'boyfriend sat bar complet delight experi',
'weird vibe owner',
'hardli meat',
'better bagel groceri store',
'go place gyro',
'love owner chef one authent japanes cool dude',

'burger good pizza use amaz doughi flavorless',
'found six inch long piec wire salsa',
'servic terribl food mediocr',
'defin enjoy',
'order albondiga soup warm tast like tomato soup frozen meatbal',
'three differ occas ask well done medium well three time got bloodiest piec meat plate',
'two bite refus eat anymor',
'servic extrem slow',
'minut wait got tabl',
'serious killer hot chai latt',
'allergi warn menu waitress absolut clue meal contain peanut',
'boyfriend tri mediterranean chicken salad fell love',
'rotat beer tap also highlight place',
'price bit concern mellow mushroom',
'worst thai ever',
'stay vega must get breakfast least',
'want first say server great perfect servic',
'pizza select good',
'strawberri tea good',
'highli unprofession rude loyal patron',
'overall great experi',
'spend money elsewher',
'regular toast bread equal satisfi occasion pat butter mmmmm',
'buffet bellagio far anticip',
'drink weak peopl',
'order correct',
'also feel like chip bought made hous',
'disappoint dinner went elsewher dessert',
'chip sal amaz',
'return',
'new fav vega buffet spot',
'serious cannot believ owner mani unexperienc employe run around like chicken head cut',
'sad',
'felt insult disrespect could talk judg anoth human like',
'call steakhous properli cook steak understand',
'impress concept food',
'thing crazi guacamol like pur ed',
'realli noth postino hope experi better',
'got food poison buffet',
'brought fresh batch fri think yay someth warm',
'hilari yummi christma eve dinner rememb biggest fail entir trip us',
'needless say go back anytim soon',
'place disgust',
'everi time eat see care teamwork profession degre',
'ri style calamari joke',
'howev much garlic fondu bare edibl',
'could bare stomach meal complain busi lunch',
'bad lost heart finish',
'also took forev bring us check ask',
'one make scene restaur get definit lost love one',
'disappoint experi',
'food par denni say good',
'want wait mediocr food downright terribl servic place',
'waaaaaayyyyyyyyyyi rate say',
'go back',
'place fairli clean food simpli worth',
'place lack style',
'sangria half glass wine full ridicul',
'bother come',
'meat pretti dri slice brisket pull pork',
'build seem pretti neat bathroom pretti trippi eat',
'equal aw',
'probabl hurri go back',
'slow seat even reserv',
'good stretch imagin',
'cashew cream sauc bland veget undercook',
'chipolt ranch dip saus tasteless seem thin water heat',
'bit sweet realli spici enough lack flavor',
'disappoint',
'place horribl way overpr',
'mayb vegetarian fare twice thought averag best',
'busi know',

```
'tabl outsid also dirti lot time worker alway friendli help menu',
'ambianc feel like buffet set douchey indoor garden tea biscuit',
'con spotti servic',
'fri hot neither burger',
'came back cold',
'food came disappoint ensu',
'real disappoint waiter',
'husband said rude even apolog bad food anyth',
'reason eat would fill night bing drink get carb stomach',
'insult profound deuchebaggeri go outsid smoke break serv solidifi',
'someon order two taco think may part custom servic ask combo ala cart',
'quit disappoint although blame need place door',
'rave review wait eat disappoint',
'del taco pretti nasti avoid possibl',
'hard make decent hamburg',
'like',
'hell go back',
'gotten much better servic pizza place next door servic receiv restaur',
'know big deal place back ya',
'immedi said want talk manag want talk guy shot firebal behind bar',
'ambianc much better',
'unfortun set us disappoint entre',
'food good',
'server suck wait correct server heimer suck',
'happen next pretti put',
'bad caus know famili own realli want like place',
'overpr get',
'vomit bathroom mid lunch',
'kept look time soon becom minut yet still food',
'place eat circumst would ever return top list',
'start tuna sashimi brownish color obvious fresh',
'food averag',
'sure beat nacho movi would expect littl bit come restaur',
'ha long bay bit flop',
'problem charg sandwich bigger subway sub offer better amount veget',
'shrimp unwrap live mile brushfir liter ice cold',
'lack flavor seem undercook dri',
'realli impress place close',
'would avoid place stay mirag',
'refri bean came meal dri crusti food bland',
'spend money time place els',
'ladi tabl next us found live green caterpillar salad',
'present food aw',
'tell disappoint',
'think food flavor textur lack',
'appetit instantli gone',
'overal impress would go back',
'whole experi underwhelm think go ninja sushi next time',
'wast enough life pour salt wound draw time took bring check']
```

In [29]:

```
len(corpus)
```

Out[29]:

```
1000
```

In [30]:

```
from sklearn.feature_extraction.text import CountVectorizer
cv = CountVectorizer(max_features = 1500)
```

In [31]:

```
X = cv.fit_transform(corpus).toarray()
```

In [32]:

```
X
```

Out[32]:

```
array([[0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0],
       ...,
       [0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0]], dtype=int64)
```

In [33]:

```
X[0]
```

Out[33]:

```
array([0, 0, 0, ..., 0, 0, 0], dtype=int64)
```

In [34]:

```
len(X[0])
```

Out[34]:

```
1500
```

In [35]:

```
cv.get_feature_names()
```

Out[35]:

```
['absolut',
 'absolutley',
 'accid',
 'accommod',
 'accomod',
 'accordingli',
 'account',
 'ach',
 'acknowledg',
 'across',
 'actual',
 'ad',
 'afford',
 'afternoon',
 'ago',
 'ahead',
 'airlin',
 'airport',
 'ala',
 'albondiga',
 'allergi',
 'almond',
 'almost',
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```

In [38]:

```

#Splitting Dataset for Testing our Model
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.20)

```

In [39]:

```

#Train Dataset using Naive Bayes Classifier
from sklearn.naive_bayes import GaussianNB
classifier = GaussianNB()
classifier.fit(X_train, y_train)

```

Out[39]:

GaussianNB()

In [40]:

```
y_pred = classifier.predict(X_test)
```

In [41]:

```

from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred)

```

Out[41]:

0.645

In [42]:

```

Review = input("Enter review: ")
input_data = [Review] #Store by converting in the form of List

input_data = cv.transform(input_data).toarray() #Covert input data into Numbers

input_pred = classifier.predict(input_data)
input_pred = input_pred.astype(int)

if input_pred[0] == 1:
    print("Review is Postive")
else:
    print("Review is Negative")

```

Enter review: Taste is Good
Review is Postive