

```
In [ ]: *****Approach to the problem*****
Using the Amazon Alexa review data set,
performed Data Analysis,
Applied Data Cleaning steps using NLTK library applied following steps
    *removing stop words,
    *removing punctuation,
    *special characters,
    *Numbers,
    *Word Tokenization,
    *Lemmatization.
Data Tranformation
    * Tokenization
**Results
Applied Multinomial Naive Bayes classification to predict if the review is positive or negative.
Got Accuracy of 91percent
**Future Work
Apply various Machine learning Algorithms and do comparision between various algorithms.
```

```
In [85]: import pandas as pd
import matplotlib.pyplot as plt
%matplotlib inline
import numpy as np
import seaborn as sns
```

```
In [86]: data = pd.read_csv('amazon_alex.tsv', delimiter='\t')
```

```
In [87]: data.head()
```

Out[87]:

	rating	date	variation	verified_reviews	feedback
0	5	31-Jul-18	Charcoal Fabric	Love my Echo!	1
1	5	31-Jul-18	Charcoal Fabric	Loved it!	1
2	4	31-Jul-18	Walnut Finish	Sometimes while playing a game, you can answer...	1
3	5	31-Jul-18	Charcoal Fabric	I have had a lot of fun with this thing. My 4 ...	1
4	5	31-Jul-18	Charcoal Fabric	Music	1

```
In [52]: data.shape
```

```
Out[52]: (3150, 5)
```

```
In [53]: data.isnull().sum()
```

```
Out[53]: rating          0  
         date            0  
         variation       0  
         verified_reviews 0  
         feedback        0  
         dtype: int64
```

```
In [26]: data.feedback.unique()
```

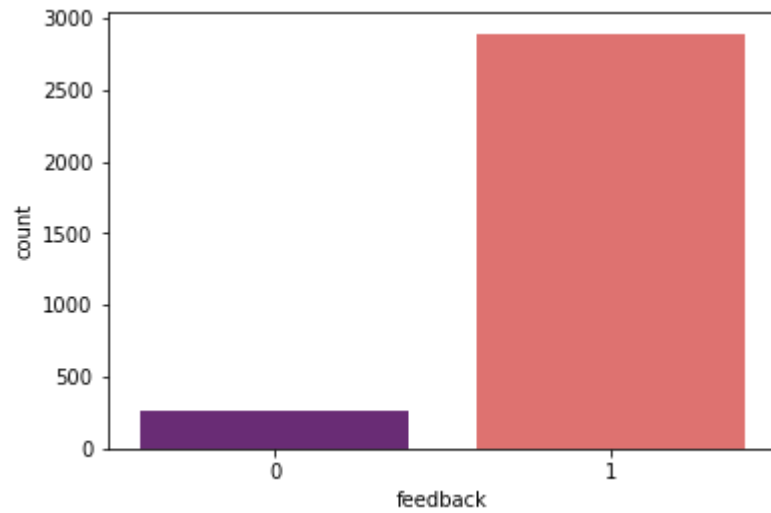
```
Out[26]: array([1, 0], dtype=int64)
```

```
In [27]: data.variation.unique()
```

```
Out[27]: array(['Charcoal Fabric ', 'Walnut Finish ', 'Heather Gray Fabric ',  
               'Sandstone Fabric ', 'Oak Finish ', 'Black', 'White',  
               'Black Spot', 'White Spot', 'Black Show', 'White Show',  
               'Black Plus', 'White Plus', 'Configuration: Fire TV Stick',  
               'Black Dot', 'White Dot'], dtype=object)
```

```
In [28]: sns.countplot(x='feedback',data=data,palette='magma')
```

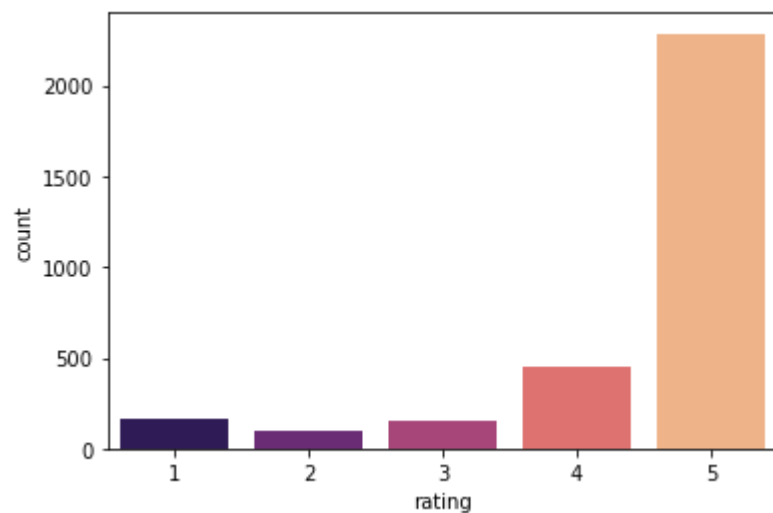
```
Out[28]: <matplotlib.axes._subplots.AxesSubplot at 0x13e1c5259b0>
```



From the above, we can observe that most of the reviews are positive

```
In [29]: sns.countplot(x='rating',data=data,palette='magma')
```

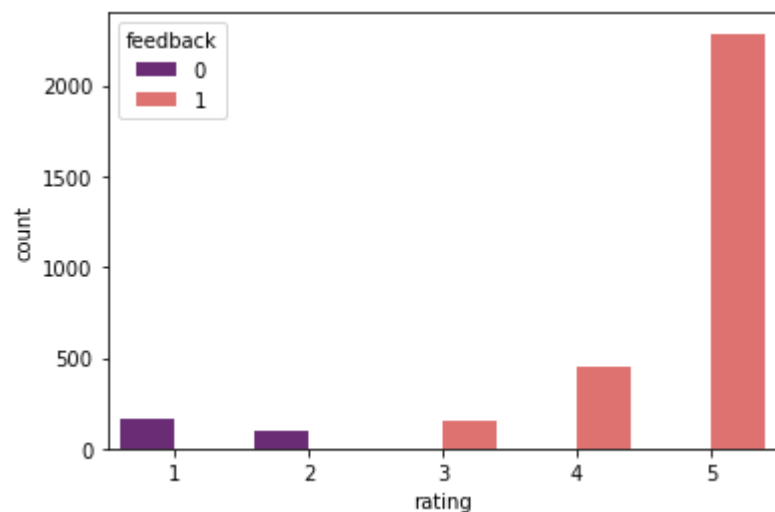
```
Out[29]: <matplotlib.axes._subplots.AxesSubplot at 0x13e1c464278>
```



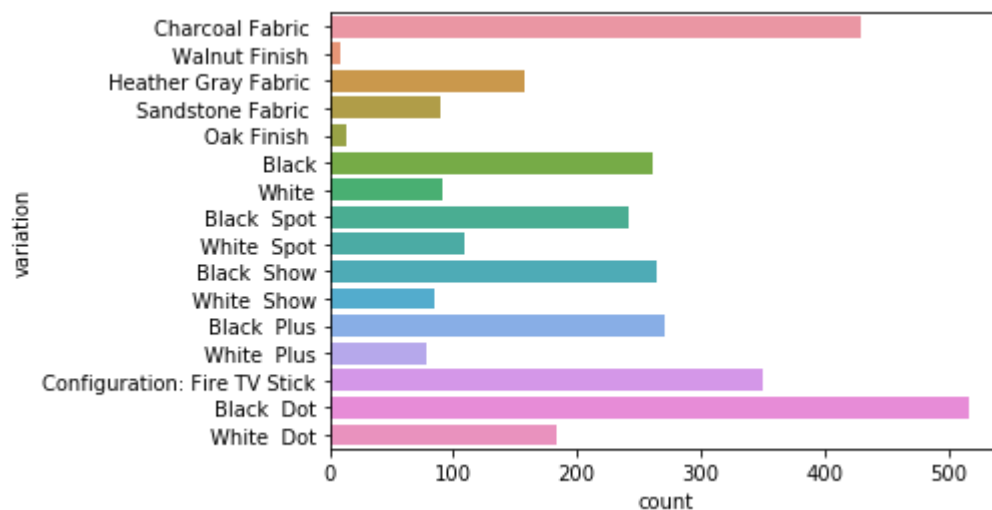
The distribution of rating from 1 to 5 is shown above

```
In [30]: sns.countplot(x='rating',hue='feedback',data=data,palette='magma')
```

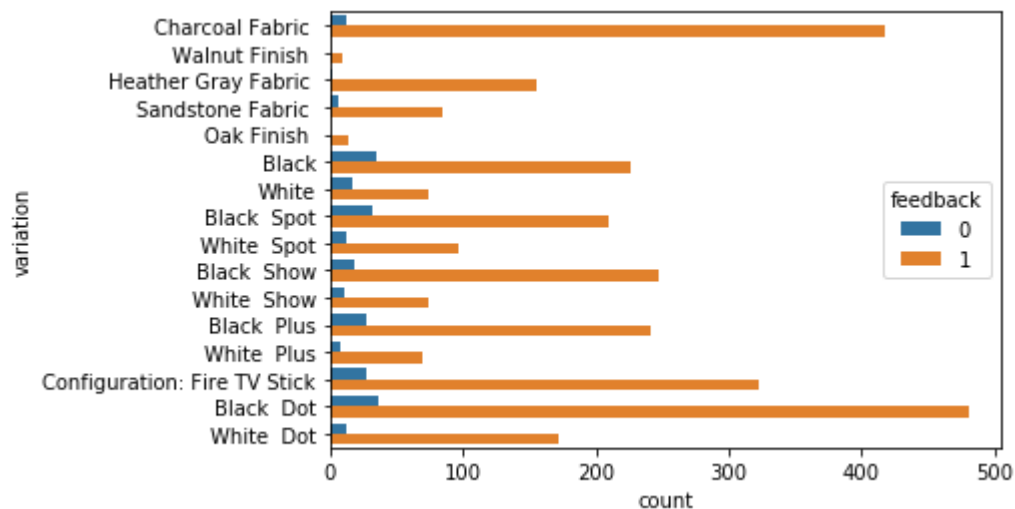
```
Out[30]: <matplotlib.axes._subplots.AxesSubplot at 0x13e1c3c1860>
```



```
In [31]: ax = sns.countplot(y="variation", data=data)
```



```
In [32]: ax = sns.countplot(y="variation", hue="feedback", data=data)
```



```
In [88]: data['Review_count'] = data['verified_reviews'].str.len()
```

```
In [89]: data.head()
```

```
Out[89]:
```

	rating	date	variation	verified_reviews	feedback	Review_count
0	5	31-Jul-18	Charcoal Fabric	Love my Echo!	1	13
1	5	31-Jul-18	Charcoal Fabric	Loved it!	1	9
2	4	31-Jul-18	Walnut Finish	Sometimes while playing a game, you can answer...	1	195
3	5	31-Jul-18	Charcoal Fabric	I have had a lot of fun with this thing. My 4 ...	1	172
4	5	31-Jul-18	Charcoal Fabric	Music	1	5

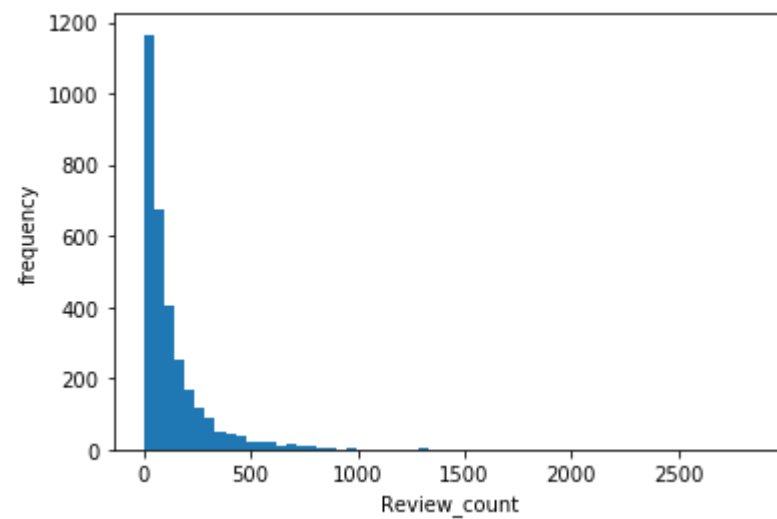
```
In [90]: data['Review_count'].max()
```

```
Out[90]: 2851
```

```
In [91]: data[data['Review_count']==2851]['verified_reviews'].iloc[0]
```

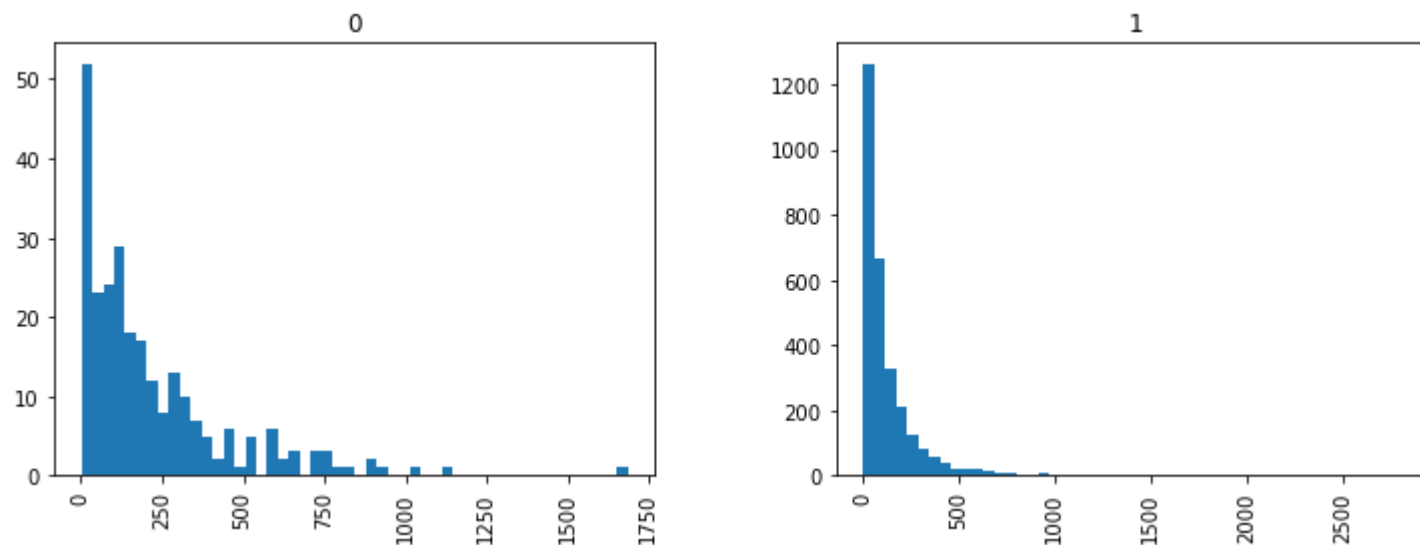
Out[91]: "Incredible piece of technology. I have this right center of my living room on an island kitchen counter. The mic and speaker goes in every direction and the quality of the sound is quite good. I connected the Echo via Bluetooth to my Sony soundbar on my TV but find the Echo placement and 360 sound more appealing. It's no audiophile equipment but there is good range and decent bass. The sound is more than adequate for any indoor entertaining and loud enough to bother neighbors in my building. The knob on the top works great for adjusting volume. This is my first Echo device and I would imagine having to press volume buttons (on the Echo 2) a large inconvenience and not as precise. For that alone I would recommend this over the regular Echo (2nd generation). The piece looks quality and is quite sturdy with some weight on it. The rubber material on the bottom has a good grip on the granite counter-- my cat can even rub her scent on it without tipping it over. This order came with a free Philips Hue Bulb which I installed along with an extra one I bought. I put the 2 bulbs into my living room floor lamp, turned on the light, and all I had to do was say "Alexa, connect my devices";. The default names for each bulb was assigned as "First light" and "Second light", so I can have a dimmer floor lamp if I just turned on/off one of the lights by saying "Alexa, turn off the second light". In the Alexa app, I created a 'Group' with "First light" and "Second light" and named the group "The light", so to turn on the lamp with both bulbs shining I just say "Alexa, turn on The light". I was surprised how easily the bulbs connected to the Echo Plus with its built in hub. I thought I would have to buy a hub bridge to connect to my floor lamp power plug. Apparently there is some technology built directly inside the bulb! I was surprised by that. Awesome. You will feel like Tony Stark on this device. I added quite a few "Skills" like 'Thunderstorm sounds' and 'Quote of the day'. Alexa always loads them up quickly. Adding songs that you hear to specific playlists on Amazon Music is also a great feature. I can go on and on and this is only my second day of ownership. I was lucky to buy this for \$100 on Prime Day, but I think for \$150 is it pretty expensive considering the Echo 2 is only \$100. In my opinion, you will be paying a premium for the Echo Plus and you have to decide if the value is there for you: 1) Taller and 360 sound unit. 2) Volume knob on top that you spin (I think this is a huge benefit over buttons) 3) Built in hub for Hue bulbs. After researching more, there are some cons to this setup if you plan on having more advanced light setups. For me and my floor lamp, it's just perfect. I highly recommend it and will buy an Echo dot for my bedroom now."

```
In [36]: plt.hist('Review_count',bins=60,data=data)  
plt.xlabel('Review_count')  
plt.ylabel('frequency')  
plt.show()
```




```
In [37]: data.hist(column='Review_count', by='feedback', bins=50,figsize=(12,4))
```

```
Out[37]: array([<matplotlib.axes._subplots.AxesSubplot object at 0x0000013E228BD748>,  
               <matplotlib.axes._subplots.AxesSubplot object at 0x0000013E228E3CC0>],  
            dtype=object)
```



```
In [92]: import nltk  
         from nltk.corpus import stopwords  
         from wordcloud import WordCloud  
         from nltk.stem import WordNetLemmatizer  
         import string  
         import re  
         from nltk.tokenize import word_tokenize
```

```
In [141]: ps=PorterStemmer()  
         review=[ps.stem(word) for word in review if not word in set(stopwords.words('english'))]  
         review=' '.join(review)  
         corpus.append(review)
```

```
In [21]: def text_preprocess(mess):
        no_punc = [char for char in mess if char not in string.punctuation]
        no_punc = ''.join(no_punc)
        return [word for word in no_punc.split() if word.lower() not in stopwords.words('English')]
```

```
In [93]: # with out using split method 2
def text_preprocess(mess):
    no_punc = [char for char in mess if char not in string.punctuation]
    no_punc = ''.join(no_punc)
    no_spl_char = re.sub("[^A-Za-z]+", " ", no_punc)
    no_URL = re.sub(r'https?:\\/\S*', '', no_spl_char)
    #no_singlechar = [i for i in no_URL if len(i) > 1]

    return [word for word in word_tokenize(no_URL) if len(word)>1 if word.lower() not in stopwords.words('English')]
```

```
In [94]: data['verified_reviews']=data['verified_reviews'].apply(text_preprocess)
```

```
In [95]: data.head(10)
```

Out[95]:

	rating	date	variation	verified_reviews	feedback	Review_count
0	5	31-Jul-18	Charcoal Fabric	[Love, Echo]	1	13
1	5	31-Jul-18	Charcoal Fabric	[Loved]	1	9
2	4	31-Jul-18	Walnut Finish	[Sometimes, playing, game, answer, question, c...	1	195
3	5	31-Jul-18	Charcoal Fabric	[lot, fun, thing, yr, old, learns, dinosaurs, ...	1	172
4	5	31-Jul-18	Charcoal Fabric	[Music]	1	5
5	5	31-Jul-18	Heather Gray Fabric	[received, echo, gift, needed, another, Blueto...	1	172
6	3	31-Jul-18	Sandstone Fabric	[Without, cellphone, use, many, features, iPad...	1	365
7	5	31-Jul-18	Charcoal Fabric	[think, th, one, Ive, purchased, Im, working, ...	1	221
8	5	30-Jul-18	Heather Gray Fabric	[looks, great]	1	11
9	5	30-Jul-18	Heather Gray Fabric	[Love, listened, songs, heard, since, childhoo...	1	114

```
In [82]: data['verified_reviews'].loc[6]
```

```
Out[82]: ['Without',  
          'cellphone',  
          'use',  
          'many',  
          'features',  
          'iPad',  
          'see',  
          'use',  
          'great',  
          'alarm',  
          'almost',  
          'deaf',  
          'hear',  
          'alarm',  
          'bedroom',  
          'living',  
          'room',  
          'reason',  
          'enough',  
          'keep',  
          'herIt',  
          'fun',  
          'ask',  
          'random',  
          'questions',  
          'hear',  
          'response',  
          'seem',  
          'smartbon',  
          'politics',  
          'yet']
```

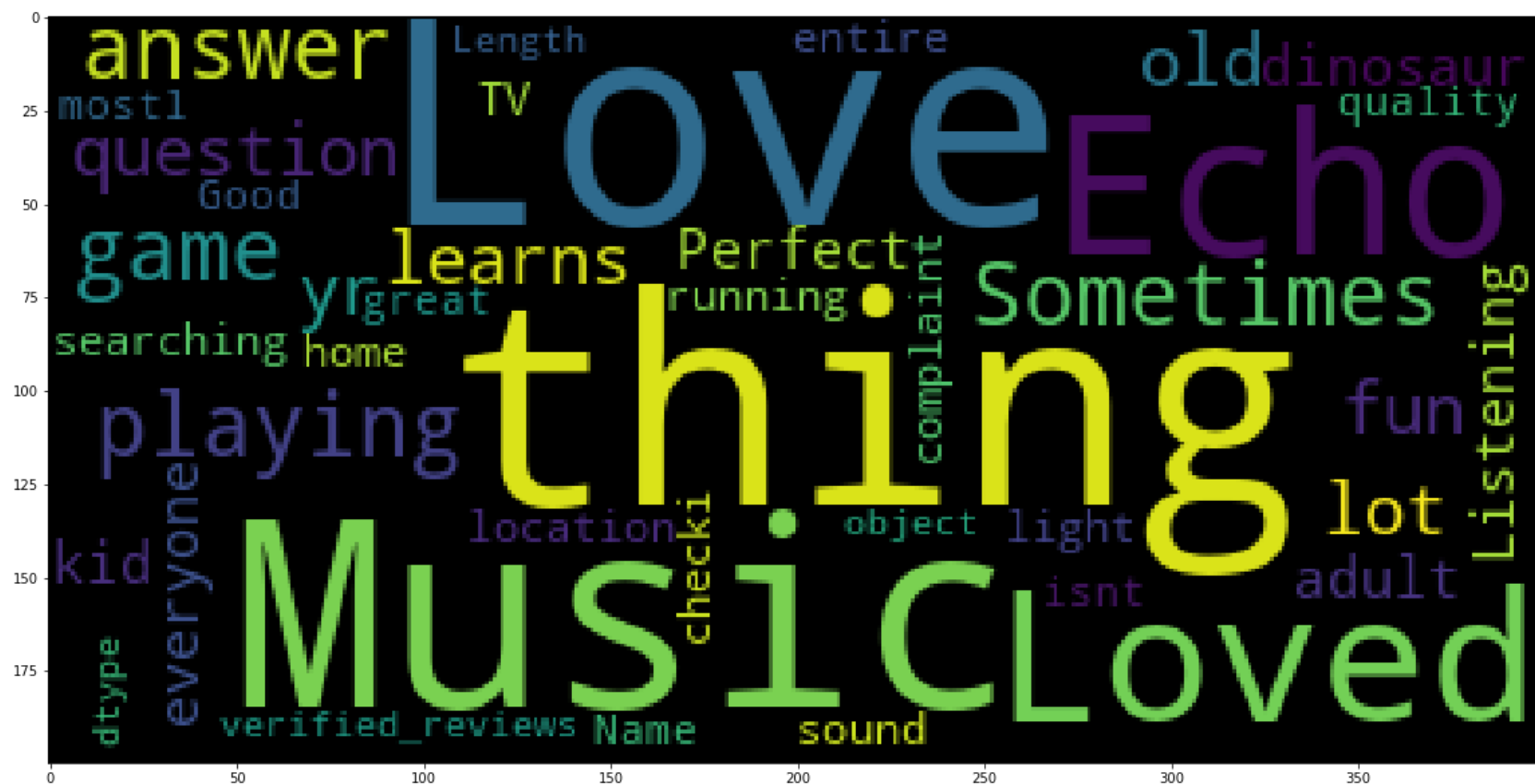
```
In [96]: w_tokenizer = nltk.tokenize.WhitespaceTokenizer()  
         lemmatizer = WordNetLemmatizer()  
         def lemmatize_text(token_text):  
             text = [lemmatizer.lemmatize(word) for word in token_text]  
             return text
```

```
In [97]: data['verified_reviews'] = data['verified_reviews'].apply(lambda x: lemmatize_text(x))
```



```
In [30]: text = str(data['verified_reviews'])  
plt.figure(figsize=(20,200))  
wc=WordCloud().generate((text))  
plt.imshow(wc)
```

```
Out[30]: <matplotlib.image.AxesImage at 0x1dad2165d68>
```



```
In [11]: from sklearn.feature_extraction.text import TfidfVectorizer
```

```
In [98]: tfidf = TfidfVectorizer(tokenizer=lambda i:i, lowercase=False)  
X = tfidf.fit_transform(data['verified_reviews'])  
y=data.iloc[:,4].values  
print(tfidf.get_feature_names())
```

['ABC', 'ABSOLUTELY', 'AF', 'AI', 'AIs', 'ALARM', 'ALEXA', 'ALEXUS', 'ALLRecipes', 'AMAZING', 'AMAZON', 'ANNOYING', 'ANOTHER', 'ASAP', 'ASK', 'AV', 'AVAILABLE', 'Able', 'Absolutely', 'Absolutly', 'Ac', 'AccentThe', 'Access', 'Acoustical', 'Acting', 'Actually', 'Adapter', 'Add', 'Added', 'Adding', 'Additionally', 'Affirmcom', 'Agent', 'Alabama', 'Alarm', 'Alarmbed', 'Alert', 'Alex', 'Alexa', 'AlexaAlso', 'AlexaEchoComputer', 'Alexas', 'Alexathis', 'Alexi', 'Alexia', 'Alexis', 'Allows', 'Almost', 'Along', 'Alread', 'Already', 'Also', 'Althorough', 'Always', 'Amazing', 'Amazingly', 'Amazon', 'AmazonAlexa', 'AmazonZigbee', 'Amazonia', 'Amazonmark', 'Amazons', 'Amazont', 'American', 'Americans', 'Android', 'Another', 'Answers', 'Ant', 'AnyList', 'Anyhow', 'Anypod', 'App', 'Apparently', 'Apple', 'Apps', 'Arlo', 'Arrived', 'Ask', 'Asked', 'Asking', 'Ass', 'Audible', 'Audio', 'August', 'Aunt', 'Awesome', 'AwesomeYou', 'BASIC', 'BEST', 'BETTER', 'BFF', 'BOSE', 'BROKEN', 'BT', 'BUY', 'Barrets', 'Barry', 'Baseball', 'Basic', 'Basically', 'Beautiful', 'Bedroom', 'Besides', 'Best', 'Better', 'Beyond', 'Bezos', 'Bible', 'Big', 'Bing', 'Birthday', 'Black', 'Blink', 'Bloods', 'Bloomberg', 'Blue', 'Blueprints', 'Bluetooth', 'Bob', 'Bolt', 'Bose', 'Bottom', 'Bought', 'Brand', 'Bridge', 'Briefing', 'British', 'Brought', 'Buffet', 'Buildin', 'Built', 'Bulb', 'Bulbs', 'ButOMG', 'Buttons', 'Buy', 'Bye', 'CABLE', 'CANCEL', 'CART', 'CBS', 'CD', 'CDAlarm', 'CDs', 'CERTIFIED', 'CHANNELS', 'CHECK', 'CNN', 'COMPLETELY', 'CONNECTED', 'CONVENIENT', 'COOL', 'CORDLESS', 'CORDLove', 'CPR', 'CREAPY', 'CSIMIAMIwithout', 'CUT', 'Call', 'Cam', 'Came', 'Camelot', 'Cams', 'Cant', 'Carolina', 'Cent', 'Certified', 'Changing', 'Channels', 'Charlotte', 'Cheap', 'Christmas', 'Chromebook', 'Chromecast', 'Classic', 'Clear', 'Clearly', 'Clock', 'Cloud', 'Come', 'Comes', 'Commands', 'Compared', 'Completely', 'Computer', 'Conferencing', 'Connected', 'Connecting', 'Connectivity', 'Connects', 'Considering', 'Contacted', 'Convenient', 'Cooks', 'Cool', 'Coop', 'Coordinator', 'Cord', 'Cost', 'Could', 'Couldnt', 'County', 'Cozi', 'Currently', 'Customer', 'DAUGHTERS', 'DEAL', 'DISAPPOINTED', 'DONT', 'DOT', 'DOTS', 'Dad', 'Dash', 'Daughter', 'Day', 'Days', 'Deals', 'Debating', 'Dec', 'Decent', 'Definitely', 'Delivery', 'Den', 'Denon', 'Design', 'Despite', 'Device', 'Didnt', 'Digital', 'Direct', 'DirectTV', 'Directv', 'Disappointed', 'Disconnects', 'Discovery', 'Dish', 'Dislike', 'Ditched', 'Divertido', 'Doesnt', 'Dont', 'Dot', 'Dots', 'Doubtful', 'Download', 'Drop', 'Dropped', 'Dylan', 'EASY', 'ECHO', 'EEAANH', 'EQ', 'EVENTS', 'EVER', 'EVERYTHING', 'EXCEPT', 'Ease', 'Easily', 'Easy', 'Echo', 'EchoDot', 'EchoNot', 'Echoand', 'EchoesI', 'Echoplus', 'Echos', 'EcoBee', 'Ecoo', 'Effortless', 'Eh', 'Element', 'Ended', 'Endless', 'English', 'Enjoy', 'Enjoyed', 'Enjoying', 'Enough', 'Entering', 'Entertainment', 'Es', 'Especially', 'Este', 'Etc', 'Et ekcity', 'Ethernet', 'Even', 'Every', 'Everyone', 'Everything', 'Ex', 'Exactly', 'Example', 'Exceeded', 'Excellente', 'Excellent', 'Exchange', 'Excited', 'Exho', 'Expectations', 'Expensive', 'Extremely', 'Extrimelly', 'FAIL', 'FAULT', 'FEE', 'FI', 'FIRE', 'FIRST', 'FRIEND', 'FUN', 'FW', 'Face', 'FaceTime', 'Failed', 'Fair', 'Fairly', 'False', 'Family', 'Fan', 'Fantastic', 'Fast', 'Father', 'Fathers', 'Favorite', 'Felt', 'Fidelity', 'Finally', 'Find', 'Fine', 'Fios', 'Fire', 'FireStick', 'Firestick', 'First', 'Fix', 'Flash', 'Followed', 'Football', 'Forever', 'Fortunately', 'Fri', 'Friday', 'Full', 'Fun', 'Funny', 'Furthermore', 'GB', 'GE', 'GET', 'GF', 'GHZ', 'GHZ', 'GO', 'GOES', 'GOING', 'GOOD', 'GREAT', 'Galaxy', 'Games', 'GameshowQuiz', 'GarbageEven', 'Gave', 'Gazebo', 'Gen', 'Generation', 'Get', 'Getting', 'Gift', 'Given', 'Glad', 'God', 'Godsend', 'Going', 'Good', 'Google', 'Googles', 'Got', 'Grab', 'Grace', 'Grandaughter', 'Granddaughter', 'Grandkids', 'Great', 'Greatest', 'Greatproduct', 'Green', 'Group', 'HAL', 'HANDY', 'HAPPY', 'HATE', 'HBO', 'HD', 'HDMI', 'HELL', 'HELP', 'HIGHLY', 'HUGE', 'HULU', 'HVAC', 'Haha', 'HahaAwesome', 'Half', 'Hands', 'Handy', 'Happy', 'Hard', 'Harmony', 'Harvard', 'Havent', 'Haywire', 'Help', 'Helps', 'Hey', 'Hi', 'Highly', 'Hmmm', 'Hole', 'Holy', 'Home', 'Honestly', 'Hong', 'Hooked', 'Hopefully', 'Hours', 'However', 'Hub', 'Hue', 'Hulu', 'Husband', 'Hut', 'IHeart', 'IM', 'INSTRUCTIONS', 'ISo', 'ITEM', 'ITyou', 'Id', 'Ideal', 'Ie', 'Ight', 'Iheart', 'Ill', 'Illustrated', 'Im', 'Imhave', 'Immediately', 'Incorporated', 'Incredible', 'India', 'Infact', 'Initially', 'Install', 'Installation', 'Installed', 'Instantaneous', 'Instantly', 'Instead', 'Instructions', 'Intercom', 'Int

ernational', 'Internet', 'Invasive', 'IoT', 'Iove', 'Ipad', 'Island', 'Italian', 'Italy', 'Item', 'Itiswhat', 'Ive', 'Jaws', 'Jeapordy', 'Jeff', 'Jeopardy', 'Jetsons', 'Jimmy', 'Johnny', 'Jokes', 'June', 'Kasa', 'KasaCam', 'Keeps', 'Kids', 'Killer', 'Kindle', 'Kitchen', 'KitchenDen', 'Kodi', 'Kong', 'Kwikset', 'LATER', 'LED', 'LIKE', 'LINK', 'LOL', 'LOOOOOOOVE', 'LOVE', 'LOVES', 'Language', 'Large', 'Last', 'Lastly', 'Lately', 'Leaning', 'Learned', 'Learning', 'Learns', 'Leary', 'Least', 'Let', 'Lets', 'Light', 'Like', 'Liked', 'Lil', 'Link', 'Linked', 'Linking', 'Listen', 'Listening', 'Listens', 'Little', 'Loads', 'Lock', 'Logitech', 'Lol', 'Long', 'Looked', 'Looking', 'Looks', 'Lots', 'Louis', 'Love', 'Loved', 'Lovee', 'Loving', 'Luckily', 'Luv', 'Lyrics', 'MOM', 'MONTHLY', 'MUST', 'Mac', 'Made', 'Madlibs', 'Mainly', 'Majel', 'Make', 'Makes', 'Making', 'Malone', 'Mama', 'Man', 'Many', 'May', 'Maybe', 'Meh', 'Menu', 'Met', 'Mexico', 'Mi', 'Mic', 'Microphone', 'Million', 'Mini', 'Moana', 'Mom', 'MonThu', 'Mother', 'Motown', 'Movies', 'Much', 'Multi', 'Music', 'MusicI', 'Musicloveit', 'Must', 'Muy', 'NBC', 'NC', 'NEEDS', 'NETFLIX', 'NEVER', 'NEW', 'NFL', 'NPR', 'NSA', 'NY', 'NYNJ', 'Neat', 'Need', 'Needed', 'Needs', 'Nervana', 'Nest', 'Net', 'Netflix', 'Never', 'New', 'News', 'Nexia', 'Next', 'Nice', 'None', 'Nope', 'North', 'Note', 'Nothing', 'Numb', 'Nurses', 'OK', 'OPTIMUM', 'Office', 'Often', 'Oh', 'Omg', 'OnTraclike', 'One', 'Ony', 'Oops', 'Opening', 'Ordered', 'Original', 'Otherwise', 'Outstanding', 'Overall', 'PAY', 'PERMANENTLY', 'PHENOMENAL', 'PHONE', 'PIA', 'PLAYLIST', 'PRESET', 'PRIME', 'PRODUCT', 'PRODUCTS', 'PRODUCTonce', 'Packing', 'Pandora', 'Part', 'People', 'Perfect', 'Perfectly', 'Perhaps', 'Personal', 'Philip', 'Philips', 'PhilipsHue', 'Phillips', 'Philly', 'Picture', 'Pizza', 'Plain', 'Planning', 'Play', 'Played', 'Playing', 'Plays', 'Please', 'Pleased', 'Plenty', 'Plug', 'Plugged', 'Plugs', 'Plus', 'Pluto', 'Poor', 'Possibly', 'Post', 'Powerful', 'Premium', 'Pretty', 'Price', 'Primarily', 'Prime', 'Pro', 'Probably', 'Product', 'Prompt', 'Pros', 'Proved', 'Purchase', 'Purchased', 'Put', 'Puts', 'QVC', 'Quality', 'Quick', 'Quote', 'REALLY', 'RECOMMEND', 'REFURBISHED', 'ROCKS', 'ROOMS', 'Radio', 'Ran', 'Ranger', 'Read', 'Ready', 'Really', 'Reason', 'Recently', 'Recommend', 'Recommended', 'Reconnecting', 'Red', 'Refurbish', 'Refurbished', 'Regular', 'Replaced', 'Replacement', 'Reset', 'Resetting', 'Resolution', 'Responds', 'Responsive', 'Return', 'Returned', 'Returning', 'Review', 'Ridiculous', 'Right', 'Ring', 'Riversa', 'Roku', 'Room', 'SCROLLING', 'SEEM', 'SEEMS', 'SHOW', 'SHOWS', 'SIGNIFICANT', 'SIRI', 'SM', 'SMART', 'SNOOZE', 'SONS', 'SPAM', 'SPECIFICALLY', 'SQYXTWrefcmccrypprdttlsol', 'SSDI', 'STICK', 'STILL', 'Sad', 'Sadly', 'Samsung', 'SamsungGalaxy', 'Satisfied', 'Save', 'Saved', 'Say', 'Says', 'Scottish', 'Screen', 'Season', 'Second', 'Secret', 'Security', 'See', 'Seems', 'Sent', 'Seriously', 'Serius', 'Set', 'Setting', 'Setup', 'Shes', 'Shopping', 'Shouldnt', 'Show', 'Showing', 'Showman', 'Shows', 'Showtime', 'Simple', 'Simply', 'Since', 'Single', 'Singley', 'Siri', 'Sirius', 'Sirriusxm', 'Six', 'Skills', 'Skype', 'Sling', 'Slowly', 'Small', 'Smaller', 'Smart', 'SmartThings', 'Smiths', 'Snell', 'Sometimes', 'Son', 'Sonos', 'Sony', 'Soon', 'Sopt', 'Sorry', 'Sound', 'SoundTouch', 'Sounds', 'Southern', 'Spanish', 'SpanishI', 'Speak', 'Speaker', 'Speakers', 'Speech', 'Spent', 'Spot', 'SpotI', 'Spotify', 'Spotlight', 'Spots', 'Spotthen', 'Sprint', 'St', 'Star', 'Stark', 'Stars', 'Started', 'Starting', 'Step', 'Stick', 'Stickeasy', 'Still', 'Stopped', 'Streaming', 'Suffolk', 'Supberb', 'Super', 'SuperEasy', 'Superb', 'Support', 'Supposed', 'Sure', 'Surprisingly', 'Sweet', 'Switched', 'Synced', 'TALK', 'TARDIS', 'TECHY', 'THING', 'TPLink', 'TRYING', 'TV', 'TVAlexa', 'TVI', 'TVmovie', 'TVs', 'Takes', 'Talking', 'Tall', 'Taller', 'Tap', 'Tasha', 'Tech', 'Technology', 'Tekkie', 'Tell', 'Terrible', 'Terrific', 'Texas', 'Text', 'Thank', 'Thanks', 'Thats', 'Theres', 'Thing', 'Things', 'Third', 'Thongs', 'Though', 'Thought', 'Thumbs', 'Thunderstorm', 'Thursday', 'TiVo', 'Timeyou', 'Told', 'Tons', 'Tony', 'Took', 'Tosca', 'Totally', 'Tower', 'Traffic', 'Training', 'Trek', 'Tremendous', 'Trending', 'Tried', 'Trivia', 'Try', 'Trying', 'Tube', 'Tubi', 'Tunes', 'Turn', 'Turned', 'Tv', 'Two', 'UNDERESTIMATED', 'UPDATE', 'USA', 'USB', 'USE', 'UTube', 'Ummm', 'Un', 'Unacceptable', 'Unbelievable', 'Understands', 'Unfortunately', 'Unit', 'Unless', 'Unlimited', 'Upgraded', 'Upon', 'Use', 'Used', 'Useful', 'Using', 'Usual', 'VLAN', 'VUDU', 'Value', 'Versatile', 'Verygod', 'Video', 'Videos',

'View', 'Voice', 'VoiceView', 'Voila', 'VoilaHaving', 'Votson', 'Volume', 'WAITING', 'WATCH', 'WEAK', 'WEEKDAYS', 'WI', 'WORK', 'WORKS', 'WOW', 'Waited', 'Wakes', 'Waking', 'Walk', 'Want', 'Wanted', 'Wasnt', 'Waste', 'Watching', 'Way', 'Weak', 'Wealth', 'Weather', 'Web', 'Well', 'Wellmade', 'Went', 'Weve', 'Whats', 'White', 'WhitenbspGreat', 'WiFi', 'Wife', 'Wifi', 'Wikipedia', 'Wink', 'Wireless', 'Wish', 'Within', 'Without', 'Wonderer', 'Wonderful', 'WooHoo', 'Work', 'Worked', 'Working', 'Workreat', 'Works', 'Worlds', 'Worth', 'Worthless', 'Worthy', 'Would', 'Wow', 'Xbox', 'Xfinity', 'YES', 'YOUTUBE', 'YOUTUBES', 'Yep', 'Yes', 'Yet', 'Yhe', 'York', 'YouTube', 'YouTubeIt', 'Youre', 'Youtube', 'Yup', 'Zigbee', 'Zwave', 'Zzzzzzz', 'abay', 'abd', 'ability', 'able', 'abode', 'absolutely', 'ac', 'accent', 'acceptable', 'accepting', 'access', 'accessNeeds', 'accessTo', 'accessible', 'accessible', 'accessing', 'accessory', 'accident', 'accidentally', 'accompanying', 'accomplish', 'accomplished', 'according', 'accordingly', 'account', 'accuracy', 'accurate', 'accurately', 'accustom', 'acknowledge', 'across', 'act', 'acting', 'action', 'activate', 'activated', 'activates', 'activating', 'activation', 'actively', 'activity', 'actually', 'ad', 'adapted', 'adapter', 'adapting', 'add', 'added', 'adict', 'addicted', 'adding', 'addition', 'additional', 'addons', 'address', 'addressed', 'adept', 'adequate', 'adjacent', 'adjust', 'adjusting', 'adjustment', 'adjusts', 'admit', 'adopter', 'adorable', 'adult', 'advance', 'advanced', 'advantage', 'advertise', 'advertised', 'advertisement', 'advertising', 'advice', 'advise', 'advised', 'aesthetic', 'affirmation', 'afford', 'affordable', 'afraid', 'afternoon', 'afterwards', 'againI', 'againThis', 'age', 'ago', 'agoYesterday', 'agree', 'agreement', 'ahead', 'aide', 'aint', 'air', 'aka', 'al', 'alarm', 'alarmThis', 'alarmcom', 'albeit', 'alcohol', 'alert', 'alexa', 'alexa', 'alexia', 'algo', 'alive', 'allOverall', 'alleviate', 'alli', 'allinone', 'allow', 'allowed', 'allowing', 'allows', 'almost', 'alone', 'along', 'alongside', 'alot', 'alots', 'aloud', 'already', 'alright', 'also', 'altering', 'alternative', 'although', 'always', 'amaonmazing', 'amaxing', 'amaze', 'amazed', 'amazin', 'amazing', 'amazingly', 'amazon', 'ambient', 'among', 'amount', 'amazon', 'amplifier', 'amused', 'amusing', 'analog', 'ands', 'angle', 'annoying', 'another', 'answer', 'answered', 'answering', 'anticipate', 'anticipated', 'antitechnology', 'anybody', 'anymore', 'anyone', 'anypod', 'anything', 'anythingI', 'anytime', 'anyway', 'anyways', 'anywhere', 'apartment', 'app', 'apparent', 'apparently', 'apparentlyLong', 'appealing', 'appear', 'appears', 'apple', 'appliance', 'application', 'appointment', 'appointmentsI', 'appon', 'appreciated', 'apprehensive', 'approaching', 'appropriate', 'approximately', 'apps', 'area', 'arent', 'argue', 'argument', 'arises', 'arlo', 'arm', 'around', 'aroundno', 'array', 'arrive', 'arrived', 'arriving', 'article', 'artist', 'artistbut', 'as', 'asap', 'ase', 'ask', 'askMy', 'asked', 'askes', 'asking', 'asleep', 'aspect', 'aspectsa', 'assigned', 'assist', 'assistance', 'assistant', 'assume', 'assumed', 'assuming', 'assumption', 'atenci', 'atmosphere', 'atr', 'attach', 'attached', 'attachment', 'attempt', 'attempted', 'attempting', 'attention', 'attractive', 'audible', 'audibleI', 'audio', 'audioApple', 'audiobook', 'audiobooks', 'audiophile', 'aunt', 'auto', 'automatic', 'automatically', 'automation', 'aux', 'auxiliary', 'avail', 'availability', 'available', 'avoid', 'awake', 'aware', 'away', 'awesome', 'awesomeunderstands', 'awful', 'awhile', 'awkward', 'awsome', 'baby', 'back', 'backThe', 'background', 'backyard', 'bad', 'baffle', 'baffled', 'ball', 'ban', 'band', 'bandwagon', 'bandwidth', 'bang', 'bar', 'bare', 'barely', 'bargain', 'bark', 'barn', 'base', 'based', 'basement', 'basic', 'basically', 'bass', 'bathroom', 'batman', 'battery', 'bc', 'beam', 'beat', 'beautiful', 'beautifully', 'beauty', 'became', 'because', 'become', 'becomes', 'becoming', 'bed', 'bedMany', 'bedroom', 'bedside', 'bedtime', 'beefy', 'begin', 'beginner', 'beginning', 'begun', 'behaved', 'behind', 'believe', 'believer', 'bell', 'belong', 'benefit', 'beside', 'best', 'bestand', 'bet', 'beta', 'better', 'betterBesides', 'bettter', 'beyond', 'bezel', 'bf', 'bible', 'big', 'bigger', 'biggest', 'bill', 'billboard', 'birth', 'birthday', 'birthdayOnly', 'bit', 'bizarre', 'black', 'blanket', 'blast', 'blasting', 'blessing', 'blind', 'blink', 'blocking', 'blow', 'blown', 'blue', 'bluetooth', 'blurring', 'board', 'boat', 'body', 'bolt', 'bonkers', 'bonus', 'book', 'booksThe', 'boom', 'boombox',

'booming', 'boost', 'boring', 'born', 'bos', 'bose', 'bot', 'bother', 'bothered', 'bothersome', 'bottom', 'bough', 'bought', 'box', 'boyfriend', 'brand', 'brandnew', 'brandunlimited', 'bread', 'break', 'breakfast', 'breeze', 'bridge', 'brief', 'briefing', 'bright', 'brightness', 'bring', 'bringing', 'broadway', 'broke', 'broken', 'brought', 'buck', 'buddy', 'budget', 'buffer', 'buffering', 'bug', 'bugging', 'building', 'built', 'builtin', 'bulb', 'bulbsWhat', 'buld', 'bulky', 'bummed', 'bunch', 'bundle', 'bundled', 'burn', 'business', 'busy', 'butNOT', 'buts', 'button', 'buy', 'buyI', 'buyWe', 'buyer', 'buying', 'buzzing', 'bye', 'cable', 'calendar', 'call', 'called', 'calling', 'calm', 'calmer', 'cam', 'cambiar', 'came', 'camera', 'campus', 'canary', 'cancel', 'canceling', 'cancelled', 'cant', 'capabilitiesbut', 'capability', 'capable', 'capacity', 'capasity', 'car', 'card', 'cardsRotate', 'care', 'carefully', 'careless', 'carful', 'carrier', 'carry', 'cartoon', 'case', 'cat', 'catch', 'category', 'cause', 'caused', 'cave', 'cease', 'ceiling', 'ceilingsCons', 'celebs', 'cell', 'cellphone', 'cent', 'center', 'certain', 'certainly', 'certified', 'chachki', 'chair', 'chairlazines', 'chalk', 'challenge', 'challenged', 'champ', 'chance', 'change', 'changed', 'changer', 'changing', 'channel', 'channelsMust', 'characteristic', 'charge', 'chargeable', 'charger', 'charging', 'charm', 'charmed', 'chart', 'chat', 'chatting', 'cheap', 'cheaper', 'cheapest', 'check', 'checked', 'checking', 'child', 'childhood', 'chocolate', 'choice', 'choose', 'choosing', 'choppy', 'chore', 'chose', 'chosen', 'circle', 'citizen', 'city', 'clapper', 'clarity', 'class', 'classical', 'classroom', 'clean', 'cleaner', 'cleaning', 'clear', 'clearAlexa', 'clearFor', 'clearer', 'clearly', 'click', 'client', 'clip', 'clock', 'clockHome', 'clockalarmradio', 'clocking', 'clockradio', 'clone', 'close', 'closed', 'closer', 'clothes', 'cloud', 'clue', 'coast', 'code', 'coffeeetc', 'cohesive', 'collection', 'collector', 'college', 'colon', 'color', 'comands', 'combination', 'combine', 'combined', 'come', 'comeletely', 'comfort', 'comfortable', 'comforting', 'coming', 'command', 'commandbut', 'commanded', 'commandsIm', 'comment', 'commercial', 'commodity', 'common', 'communicate', 'communicated', 'communicating', 'communication', 'community', 'commute', 'commuteIf', 'como', 'compacity', 'compact', 'companion', 'company', 'comparable', 'compare', 'compared', 'compatible', 'competition', 'complacated', 'complain', 'complainI', 'complained', 'complaining', 'complaint', 'complaintNo', 'complete', 'completed', 'completely', 'complicated', 'compliment', 'component', 'compound', 'computer', 'con', 'concept', 'concern', 'concerned', 'concerning', 'concise', 'condition', 'conditioning', 'conectado', 'conferencing', 'confident', 'configure', 'configured', 'conflict', 'confused', 'confuses', 'confusing', 'confusionI', 'connect', 'connected', 'connectedWell', 'connecting', 'connectingcheck', 'connection', 'connectivity', 'connectivityit', 'connects', 'conscious', 'consider', 'considering', 'consistent', 'consistently', 'conspiracy', 'constant', 'constantly', 'constructed', 'consulting', 'consumer', 'contact', 'contacted', 'contains', 'content', 'continous', 'continually', 'continue', 'continues', 'continuous', 'continuously', 'control', 'controll', 'controlle', 'controller', 'controlling', 'convenience', 'convenient', 'conversation', 'convert', 'convinced', 'cook', 'cooking', 'cool', 'coolBONUS', 'cooler', 'coolest', 'cord', 'cordThank', 'cordless', 'core', 'correct', 'corrected', 'correctly', 'corresponds', 'cortna', 'cost', 'cotton', 'couch', 'could', 'couldnt', 'counter', 'countless', 'country', 'couple', 'course', 'courseAlexa', 'cousin', 'cover', 'covered', 'coworker', 'cracked', 'crackling', 'crap', 'crappy', 'crash', 'crashed', 'crashing', 'crazy', 'create', 'created', 'credited', 'creepy', 'crib', 'crisp', 'critically', 'cropping', 'cross', 'crunchyroll', 'cualquier', 'cue', 'culas', 'cumber', 'some', 'cup', 'current', 'currently', 'cursed', 'curve', 'custom', 'customer', 'customizable', 'customization', 'customize', 'cut', 'cute', 'cutie', 'cutting', 'cycle', 'cycled', 'cylinder', 'cylindercal', 'dad', 'daily', 'damage', 'dance', 'dancing', 'dare', 'dark', 'darn', 'dash', 'data', 'date', 'dated', 'daughter', 'day', 'dayUsed', 'daytoday', 'de', 'deactivate', 'dead', 'deaf', 'deal', 'dealSet', 'debating', 'decent', 'decide', 'decided', 'decides', 'decision', 'deck', 'decor', 'decorated', 'decrease', 'dedicated', 'deep', 'deeper', 'default', 'defaultKaren', 'defeat', 'defective', 'defectiveThis', 'defence', 'defently', 'definately',

'define', 'definitely', 'definition', 'definitively', 'defuserI', 'degree', 'del', 'delay', 'delete', 'deliver', 'delivered', 'delivers', 'delivery', 'deliveryOverall', 'demand', 'dementia', 'dense', 'dented', 'department', 'dependable', 'dependence', 'depending', 'deployed', 'depreciates', 'depth', 'described', 'description', 'design', 'designed', 'designer', 'desired', 'desk', 'despite', 'detail', 'detailed', 'detect', 'determined', 'developed', 'developer', 'development', 'device', 'deviceI', 'deviceOverall', 'deviceRight', 'devicesPlus', 'devise', 'dhiw', 'diagnostics', 'dial', 'dictionary', 'didShe', 'didnt', 'died', 'differ', 'difference', 'different', 'differentThe', 'differentiate', 'difficult', 'difficulty', 'dig', 'digital', 'digitol', 'dim', 'dimat', 'dimension', 'dimmer', 'dimming', 'dime', 'dining', 'dinner', 'dinnerAs', 'dinosaur', 'direct', 'direction', 'directly', 'directv', 'disability', 'disable', 'disabled', 'disagree', 'disappoint', 'disappointed', 'disappointing', 'disappointment', 'disarm', 'disaster', 'disconcerting', 'disconnect', 'disconnected', 'disconnecting', 'disconnection', 'discount', 'discourage', 'discover', 'discovered', 'discoveredthat', 'discovers', 'discovery', 'dislike', 'dismiss', 'dismissed', 'display', 'displayed', 'displaying', 'disposable', 'dissatisfaction', 'distance', 'distorted', 'distracting', 'distraction', 'disturbing', 'ditch', 'diversity', 'dj', 'doAlexa', 'doSide', 'docking', 'doctor', 'documentationinstructions', 'dodging', 'doesnt', 'dog', 'dollar', 'domain', 'done', 'donr', 'dont', 'door', 'doorbell', 'doorbellyou', 'dorm', 'dot', 'downUpdate', 'downfall', 'download', 'downloaded', 'downloading', 'downright', 'downside', 'downstairs', 'downstairsso', 'drag', 'draw', 'drawback', 'drawing', 'dressed', 'drive', 'driven', 'driver', 'driving', 'drop', 'dropin', 'dropped', 'dropping', 'dryer', 'due', 'dumb', 'dumber', 'dunce', 'dunno', 'dust', 'duty', 'dy', 'dying', 'e', 'ear', 'early', 'earn', 'ease', 'easier', 'easierI', 'easierthough', 'easily', 'east', 'easy', 'eavesdropping', 'echo', 'echoStill', 'echoloving', 'echosecho', 'eco', 'ecosystem', 'ed', 'edge', 'edit', 'educated', 'educational', 'effect', 'effected', 'effective', 'efficiency', 'efficient', 'effort', 'effortless', 'eg', 'eh', 'either', 'el', 'elderly', 'electeonically', 'electrician', 'electricity', 'electronic', 'electronically', 'electronics', 'elegant', 'eliminate', 'else', 'elseI', 'elsewhere', 'em', 'email', 'embarrassed', 'emergency', 'emoji', 'employee', 'en', 'enable', 'enabled', 'enables', 'encyclopedia', 'end', 'ended', 'engage', 'engagement', 'engaging', 'engine', 'engineer', 'enhanced', 'enjoy', 'enjoyable', 'enjoyed', 'enjoying', 'enjoyment', 'enjoys', 'enough', 'enrolment', 'enter', 'entering', 'enters', 'entertained', 'entertaining', 'entertainment', 'entire', 'entirely', 'entry', 'equal', 'equalizer', 'equipment', 'equipo', 'error', 'escencia', 'esp', 'espa', 'espanol', 'especialy', 'essential', 'essentially', 'est', 'esta', 'estar', 'estudio', 'etc', 'etcHighly', 'etcUntil', 'etcthe', 'evaluate', 'even', 'evening', 'event', 'eventually', 'ever', 'everfloating', 'every', 'everybody', 'everyday', 'everyone', 'everything', 'everythingI', 'everytime', 'everywhere', 'everyday', 'evolve', 'evrything', 'exact', 'exactly', 'example', 'examplesI', 'exasperationI', 'exceeded', 'exceeds', 'excelente', 'excellent', 'excellently', 'except', 'exception', 'exceptionally', 'excessive', 'exchange', 'exchangereturn', 'exchanging', 'excited', 'excitement', 'excuse', 'existence', 'existent', 'existing', 'expanded', 'expanding', 'expect', 'expectation', 'expected', 'expectedalready', 'expecting', 'expensive', 'experience', 'experienced', 'expert', 'expired', 'expires', 'explanation', 'explicit', 'explore', 'explored', 'exploring', 'extend', 'extended', 'extender', 'extends', 'extension', 'extent', 'external', 'extra', 'extremely', 'eye', 'fabric', 'fabriccolor', 'fabulous', 'face', 'facebook', 'fact', 'factor', 'factory', 'failing', 'fails', 'fairly', 'fairness', 'fall', 'falling', 'familiar', 'family', 'fan', 'fanatic', 'fanlove', 'fantastic', 'far', 'farstill', 'farther', 'fascinating', 'fashioned', 'fast', 'faster', 'fat', 'father', 'fault', 'faulty', 'favorite', 'features', 'feature', 'featureI', 'featureShe', 'featured', 'featurejust', 'featuresservice', 'fees', 'fee', 'feed', 'feedback', 'fee', 'feel', 'feeling', 'fell', 'felt', 'fencing', 'fiance', 'fidelity', 'figure', 'figured', 'figuring', 'fill', 'filled', 'final', 'finally', 'find', 'finding', 'fine', 'finebut', 'fingertip', 'finicky', 'finish', 'fios', 'fire', 'firestick', 'firmware', 'firmware', 'first', 'firstgen', 'f

it', 'five', 'fix', 'fixed', 'fixedI', 'fixing', 'fixture', 'flash', 'flat', 'flaw', 'flawless', 'flawlessl
y', 'flexibility', 'flexible', 'flickering', 'floor', 'floored', 'fm', 'folk', 'follow', 'followed', 'font',
'foot', 'football', 'footprint', 'force', 'forecast', 'forever', 'forget', 'forgot', 'forgotten', 'forjust',
'form', 'forth', 'forum', 'forward', 'found', 'four', 'fourth', 'free', 'freeze', 'frequently', 'friend', 'fr
iendly', 'front', 'frustrated', 'frustrating', 'frustration', 'full', 'fuller', 'fullfledged', 'fullsize', 'f
ull sized', 'fully', 'fumble', 'fun', 'funIt', 'funSometimes', 'funciona', 'funcionamiento', 'funciones', 'fun
ction', 'functionEvery', 'functionality', 'funmusic', 'funny', 'funnybut', 'fussing', 'fussy', 'future', 'gad
get', 'gadgetDrives', 'gain', 'game', 'gaming', 'gap', 'garage', 'garbage', 'gateway', 'gather', 'gathering',
'gave', 'ge', 'geared', 'geek', 'gen', 'gender', 'general', 'generally', 'generation', 'generationThe', 'geni
al', 'genre', 'geo', 'geofencing', 'get', 'getting', 'ghost', 'ghz', 'gift', 'girl', 'girlfriend', 'give', 'g
iven', 'giving', 'gizmo', 'glad', 'glaring', 'glass', 'glitch', 'glitching', 'glorified', 'glow', 'go', 'goin
g', 'golden', 'gone', 'goo', 'good', 'goodSincerely', 'goodSome', 'goodmorning', 'goodness', 'goody', 'googl
e', 'googled', 'got', 'gotten', 'government', 'grab', 'grand', 'grandchild', 'grandchildrenwho', 'granddaught
er', 'grandfather', 'grandkids', 'grandmother', 'grandparent', 'grandson', 'granite', 'granted', 'graphic',
'gratamente', 'great', 'greatHaving', 'greatI', 'greatThe', 'greatWith', 'greater', 'greatest', 'greatit', 'g
reatly', 'greatvideo', 'green', 'greeting', 'grip', 'gripe', 'grocery', 'groggy', 'ground', 'group', 'growin
g', 'grownup', 'grows', 'guarantee', 'guaranteeing', 'guard', 'guess', 'guest', 'guide', 'guilty', 'guy', 'ha
bit', 'habla', 'hadnt', 'haha', 'hahahaha', 'hair', 'half', 'hallway', 'hand', 'handle', 'handled', 'handsfre
e', 'handy', 'hang', 'happen', 'happened', 'happening', 'happens', 'happensThe', 'happier', 'happy', 'hard',
'hardcore', 'harder', 'hardly', 'hasnt', 'hassel', 'hassle', 'hate', 'hated', 'hauler', 'haveThe', 'havelov
e', 'havent', 'hcfe', 'hd', 'hdm', 'he', 'head', 'headline', 'headphone', 'healing', 'hear', 'heard', 'hearin
g', 'hears', 'heart', 'heaven', 'heavy', 'heavyso', 'heck', 'hectic', 'held', 'helpful', 'hell', 'help', 'help
Using', 'helped', 'helper', 'helpful', 'helping', 'hence', 'herIt', 'hernot', 'hesitant', 'hesitate', 'hesita
ted', 'hey', 'hiccup', 'hide', 'high', 'higher', 'highest', 'highly', 'hint', 'hire', 'hired', 'hiring', 'his
tory', 'hit', 'hmm', 'hmmm', 'hold', 'holder', 'holding', 'hole', 'holiday', 'home', 'homeI', 'homewhat', 'ho
mescreen', 'homework', 'honest', 'honestly', 'hook', 'hooked', 'hope', 'hoped', 'hopefully', 'hoping', 'horri
ble', 'horse', 'hospital', 'hosting', 'hot', 'hotel', 'hour', 'house', 'houseDo', 'houseThe', 'household', 'h
ouseThe', 'however', 'hr', 'httpswwwamazoncomdpB', 'hub', 'hubbed', 'hubby', 'hubsThe', 'hue', 'huele', 'hug
e', 'human', 'humour', 'hundred', 'husband', 'hype', 'iHeartRadio', 'iMusic', 'iPad', 'iPads', 'iPhone', 'iT
unes', 'id', 'idea', 'ifs', 'ignored', 'ignoring', 'ihome', 'ii', 'im', 'image', 'imagination', 'imagine', 'im
agined', 'immediately', 'impaired', 'impede', 'imperfection', 'implementing', 'important', 'importantly', 'im
pressed', 'impressive', 'improve', 'improved', 'improvement', 'improving', 'impulse', 'imrproved', 'inabilit
y', 'inactivity', 'include', 'included', 'includedplease', 'includes', 'including', 'inclusive', 'income', 'i
nconvenience', 'inconvenient', 'increase', 'increasing', 'incredible', 'incredibly', 'indicated', 'indicato
r', 'indispensable', 'individual', 'individually', 'indoor', 'indundated', 'industry', 'inexpensive', 'inexpe
rience', 'inferior', 'info', 'infoDot', 'information', 'informative', 'informed', 'infotainment', 'initial',
'initially', 'initiate', 'inline', 'innovative', 'input', 'insanely', 'insanity', 'insert', 'inside', 'insis
t', 'inspired', 'install', 'installation', 'installed', 'installing', 'installs', 'instant', 'instantly', 'in
stead', 'instruction', 'integrate', 'integrated', 'integrates', 'integrating', 'integration', 'intelagence',
'inteligente', 'intelligent', 'intend', 'intended', 'intendedI', 'intention', 'interact', 'interacting', 'int
eraction', 'interactive', 'intercom', 'interest', 'interested', 'interesting', 'interface', 'interfacing', 'i
nterference', 'interferes', 'intermittent', 'intermittently', 'internal', 'internet', 'interpret', 'interroga
ted', 'interrupt', 'interruption', 'intimidating', 'introduce', 'introducing', 'introduction', 'intrusive',

'intuitive', 'invasion', 'invasive', 'invention', 'invest', 'invested', 'investing', 'investment', 'inviting', 'involved', 'involves', 'ipdates', 'iphone', 'irritated', 'irritating', 'ise', 'ish', 'island', 'isnt', 'isolated', 'issue', 'issueover', 'issuesFirst', 'issuesworks', 'issue', 'itShe', 'itThe', 'itWhat', 'ita', 'itd', 'item', 'itjust', 'itll', 'itselfI', 'itshe', 'itso', 'itsuch', 'itthis', 'iy', 'jack', 'jacuzzi', 'jam', 'jamming', 'jazz', 'job', 'join', 'joke', 'joked', 'journey', 'joy', 'jump', 'jumped', 'jumping', 'junkThey', 'kasa', 'keen', 'keep', 'keeper', 'keeping', 'kept', 'key', 'keyboard', 'kick', 'kicking', 'kid', 'kidfriendly', 'kind', 'kinda', 'kindle', 'king', 'kitchen', 'kitchenliving', 'knee', 'knew', 'knob', 'knock', 'knocked', 'know', 'knowing', 'knowledgable', 'knowledge', 'knowledgeable', 'known', 'kodi', 'korea', 'la', 'labeled', 'lack', 'lacking', 'lady', 'lag', 'lagging', 'lame', 'lamp', 'land', 'language', 'lapsed', 'laptop', 'laptopdesktop', 'large', 'larger', 'last', 'lastly', 'late', 'lately', 'later', 'lauded', 'laugh', 'laundry', 'law', 'layer', 'laying', 'lazy', 'lcd', 'le', 'leaf', 'leaning', 'learn', 'learned', 'learning', 'learning', 'learns', 'least', 'leave', 'leaving', 'left', 'leg', 'legally', 'leisure', 'length', 'lesson', 'let', 'level', 'levelsAll', 'library', 'life', 'lifechanging', 'lifetime', 'lifht', 'light', 'lightbulb', 'lightening', 'lighting', 'lightning', 'lightswithout', 'like', 'liked', 'likely', 'liking', 'lilittle', 'limitation', 'limited', 'line', 'link', 'linked', 'linking', 'linksPlug', 'list', 'listen', 'listened', 'listening', 'listens', 'lit', 'literally', 'literate', 'little', 'live', 'lived', 'living', 'livingroom', 'llama', 'lleg', 'lm', 'lo', 'load', 'loaded', 'local', 'locate', 'located', 'location', 'lock', 'locked', 'logo', 'logra', 'lol', 'loli', 'lolol', 'lonely', 'long', 'longer', 'longevity', 'look', 'looked', 'looking', 'loos', 'loose', 'loosing', 'lose', 'loses', 'losing', 'loss', 'lost', 'lot', 'lotsI', 'loud', 'louder', 'lov', 'love', 'loved', 'lover', 'loving', 'low', 'lower', 'ltiples', 'luck', 'lucky', 'lullaby', 'lurking', 'luv', 'lve', 'lyric', 'lyrical', 'machine', 'maddening', 'made', 'magically', 'mailed', 'main', 'mainly', 'mainstream', 'maintain', 'maintaining', 'majes', 'major', 'majorthe', 'make', 'making', 'male', 'man', 'manage', 'management', 'mandator', 'y', 'maneuver', 'manner', 'manual', 'manually', 'manufacturer', 'manufacturersLG', 'many', 'marginal', 'mark', 'marked', 'market', 'marketing', 'marvelous', 'massive', 'match', 'matched', 'material', 'matter', 'maximize', 'may', 'maybe', 'mb', 'meCONS', 'meDo', 'meI', 'mean', 'meaningful', 'meant', 'medical', 'medication', 'mediocre', 'meditation', 'medium', 'meh', 'mejst', 'member', 'membership', 'memory', 'mention', 'mentioned', 'menu', 'meotherwise', 'mere', 'message', 'messaging', 'messed', 'met', 'metro', 'mic', 'microphone', 'mics', 'mid', 'middle', 'mids', 'might', 'mile', 'million', 'mimic', 'min', 'mind', 'mindset', 'mine', 'mini', 'miniPROS', 'minimal', 'minimum', 'minor', 'minorly', 'mint', 'minute', 'mirroring', 'misled', 'misplace', 'miss', 'missed', 'missing', 'mistake', 'misunderstands', 'mixed', 'mobile', 'mobility', 'mode', 'model', 'moder', 'mom', 'moment', 'money', 'monitor', 'month', 'monthly', 'monthsthey', 'mood', 'morning', 'mostly', 'mother', 'mothershe', 'motivation', 'mount', 'mounted', 'move', 'moved', 'movie', 'moving', 'mu', 'much', 'muffled', 'multiple', 'music', 'musicI', 'musicThe', 'musicchecking', 'musiclaughter', 'musicprime', 'musicrelated', 'musicthe', 'must', 'musthave', 'mute', 'mybedroom', 'myselfI', 'na', 'name', 'named', 'nana', 'nanny', 'native', 'natural', 'nature', 'navigate', 'navigating', 'navigation', 'naw', 'nd', 'ne', 'near', 'nearly', 'neat', 'necessity', 'need', 'needed', 'needing', 'needna', 'negative', 'negativeI', 'neighbor', 'neither', 'nephew', 'nervous', 'nest', 'net', 'netflix', 'network', 'networktechnology', 'never', 'new', 'newer', 'newest', 'newno', 'news', 'newsflash', 'newsits', 'next', 'ni', 'nice', 'niceclear', 'nicely', 'niceneeds', 'nicer', 'niece', 'nigh', 'night', 'nightmare', 'nightstand', 'nil', 'nit', 'nite', 'no', 'nobody', 'nobrainer', 'nois', 'noise', 'non', 'none', 'nonschool', 'nonsense', 'nonstop', 'nope', 'norm', 'normal', 'north', 'notI', 'note', 'nothing', 'notice', 'noticeable', 'noticed', 'notification', 'notifies', 'novelty', 'nowhere', 'nowi', 'npr', 'nrw', 'nudged', 'number', 'numerous', 'nut', 'obsessed', 'obtrusive', 'obvious', 'occasion', 'occasional', 'occasionally', 'ocean', 'odd', 'odds', 'ofI', 'offer', 'offered', 'office', 'officeIt', 'offic

ially', 'offing', 'often', 'oh', 'ok', 'okay', 'ol', 'old', 'older', 'oldest', 'olor', 'onceProblem', 'one', 'oneHonestly', 'oneIt', 'onetill', 'onetime', 'online', 'onme', 'onoff', 'onto', 'oops', 'open', 'opened', 'opening', 'opera', 'operate', 'operation', 'operator', 'opinion', 'opportunity', 'opt', 'optical', 'option', 'optionMoreover', 'optional', 'orange', 'orchestra', 'order', 'ordered', 'ordering', 'organization', 'organized', 'orientation', 'oriented', 'original', 'originale', 'originally', 'others', 'otherwise', 'outdoor', 'outdoors', 'outlet', 'output', 'outrageous', 'outside', 'outsideThis', 'outsmart', 'outstanding', 'oven', 'overThis', 'overa', 'overall', 'overcoming', 'overdriven', 'overheating', 'overpriced', 'override', 'overtime', 'overview', 'overwhelming', 'owe', 'owlhead', 'owned', 'owner', 'ownershipI', 'owning', 'package', 'packagePerhaps', 'packaged', 'packaging', 'packing', 'page', 'pageI', 'pagesThe', 'paid', 'pain', 'pair', 'paired', 'pairing', 'pamphlet', 'pandora', 'pant', 'paper', 'par', 'paranoid', 'pare', 'parent', 'parentseasy', 'park', 'product', 'part', 'participating', 'particular', 'particularly', 'partner', 'party', 'pas', 'password', 'past', 'patch', 'patience', 'patient', 'patio', 'pattern', 'pause', 'pay', 'payed', 'paying', 'pc', 'pel', 'pen', 'pencil', 'penny', 'people', 'pep', 'per', 'perdi', 'perfect', 'perfectI', 'perfectly', 'perfectlyVery', 'perfecto', 'perform', 'performance', 'performed', 'performing', 'performs', 'period', 'perk', 'permanently', 'persist', 'person', 'personal', 'personality', 'personalization', 'personalized', 'personally', 'persuasion', 'pet', 'phase', 'phenomenal', 'philip', 'phone', 'phoneand', 'phonetically', 'photo', 'photograph', 'phrase', 'pic', 'pick', 'picked', 'picking', 'pickup', 'picky', 'picture', 'piece', 'pin', 'pivoting', 'pixelated', 'place', 'placed', 'placement', 'placing', 'plain', 'plan', 'plane', 'planning', 'platform', 'play', 'played', 'player', 'playing', 'playingI', 'playlist', 'playlistI', 'playlistsWhats', 'pleasantly', 'please', 'pleased', 'pleasedSimple', 'pleasure', 'plenty', 'plug', 'plugged', 'plughas', 'plugin', 'plugins', 'plus', 'plusminus', 'plusprimeetc', 'pm', 'pod', 'podcast', 'podcasts', 'point', 'pointed', 'pointless', 'pointlessI', 'politics', 'pool', 'poop', 'poor', 'pop', 'porch', 'porchthe', 'port', 'portability', 'portable', 'portion', 'posed', 'position', 'positive', 'possibility', 'possible', 'possibly', 'post', 'poster', 'potential', 'pound', 'power', 'powercord', 'powerful', 'practical', 'practically', 'practicalthan', 'pray', 'preciously', 'precise', 'prefer', 'preference', 'preferred', 'preinstalled', 'premium', 'prepare', 'preparing', 'present', 'preset', 'press', 'presumably', 'prettier', 'pretty', 'prevent', 'prevents', 'preview', 'previous', 'previously', 'price', 'priced', 'pricy', 'pricing', 'primarily', 'primary', 'prime', 'primeday', 'print', 'prior', 'privacy', 'prize', 'pro', 'probably', 'problem', 'problemI', 'procedure', 'process', 'produc', 'product', 'productBut', 'productEcho', 'productSuggested', 'productThere', 'producto', 'productsAnd', 'productwas', 'profile', 'program', 'programing', 'programmed', 'programming', 'project', 'projection', 'promised', 'promoting', 'promotion', 'promotionand', 'prompt', 'prompt', 'prop', 'proper', 'properly', 'properlyno', 'protected', 'protection', 'protocol', 'prove', 'proved', 'provey', 'provide', 'provided', 'provider', 'provides', 'providing', 'psychological', 'pueden', 'pull', 'pulling', 'pulsate', 'pulsed', 'punch', 'puny', 'pup', 'pur', 'purchase', 'purchased', 'purchaser', 'purchasesI', 'purchasing', 'pure', 'purely', 'purpose', 'push', 'pushed', 'put', 'putting', 'puzzled', 'quality', 'qualty', 'que', 'qued', 'query', 'question', 'questionable', 'questionsHands', 'questionsIt', 'questionsneed', 'quick', 'quicker', 'quickly', 'quiet', 'quit', 'quite', 'quiz', 'quotnotificationquot', 'radio', 'radioalarmIt', 'rain', 'rainand', 'rainbow', 'rainsoaked', 'raised', 'rambled', 'ran', 'random', 'randomly', 'range', 'rapidez', 'rare', 'rarely', 'rarity', 'rate', 'rather', 'rating', 'rattlecrackle', 'rattling', 'rcieved', 'rd', 'reach', 'reached', 'reaching', 'reactive', 'read', 'reader', 'reading', 'readingglasses', 'ready', 'real', 'realizando', 'realize', 'realized', 'realizing', 'really', 'reason', 'reasonable', 'reauthorize', 'reboot', 'rebooted', 'rebooting', 'reboots', 'reccomend', 'receivded', 'receive', 'received', 'receiver', 'receiving', 'recent', 'recently', 'reception', 'rechargeable', 'recharged', 'recipe', 'recipient', 'recognition', 'recognize', 'recognizes', 'recomendable', 'recommend', 'recommended',

'recommending', 'reconditioned', 'reconnect', 'reconnected', 'reconnecting', 'record', 'recorded', 'recordin
g', 'recurring', 'red', 'reduced', 'redundant', 'refer', 'reference', 'referred', 'refers', 'refined', 'refun
d', 'refurb', 'refurbished', 'refurbishedThought', 'refurbishing', 'refurbs', 'regard', 'regardless', 'region
al', 'register', 'registered', 'regret', 'regular', 'regularly', 'related', 'relatively', 'relaxing', 'rela
y', 'release', 'released', 'reliable', 'relief', 'rely', 'remaining', 'remains', 'remedial', 'remember', 'rem
emberI', 'remembering', 'remind', 'reminded', 'reminder', 'reminding', 'reminds', 'remorse', 'remote', 'remot
eno', 'rename', 'rent', 'renting', 'reoccurring', 'reorder', 'rep', 'repair', 'repeat', 'repeated', 'repeatin
g', 'repertoire', 'replace', 'replaced', 'replacement', 'replaces', 'replacing', 'replied', 'replying', 'repo
rt', 'reported', 'reportsAlarm', 'reputation', 'request', 'requesting', 'require', 'required', 'requires', 'r
erecordings', 'research', 'researched', 'researching', 'resembling', 'resempion', 'reset', 'resetting', 'res
ist', 'resistant', 'resolution', 'resolve', 'resolved', 'respond', 'responding', 'responds', 'response', 'res
ponsive', 'responsiveAlexa', 'responsivecan', 'responsiveness', 'respuesta', 'rest', 'restart', 'restrictio
n', 'restrictive', 'result', 'resultsThe', 'resume', 'retired', 'return', 'returned', 'returnef', 'returnin
g', 'review', 'reviewing', 'revise', 'reward', 'rid', 'ride', 'ridiculous', 'ridiculously', 'right', 'ring',
'road', 'rock', 'roku', 'roll', 'room', 'roomOther', 'roomYou', 'roomba', 'roomfilling', 'roomkitchen', 'rota
te', 'rotates', 'rotation', 'rotationsSwipe', 'rough', 'round', 'route', 'router', 'routine', 'routinely', 'r
ow', 'rst', 'rub', 'rubber', 'run', 'running', 'sad', 'safe', 'said', 'sale', 'salsa', 'sang', 'sanity', 'sat
ellite', 'satisfied', 'satisfied', 'save', 'saved', 'saving', 'savvy', 'savy', 'saw', 'say', 'saying', 'says
but', 'scared', 'scene', 'scent', 'schedule', 'scheduled', 'scheduling', 'school', 'schoolThe', 'science', 's
cooped', 'score', 'scoured', 'scratch', 'scratched', 'screamig', 'screaming', 'screen', 'screenMaybe', 'scee
nSelect', 'screenless', 'screensAnother', 'screw', 'script', 'scroll', 'scrolling', 'se', 'sealed', 'seam',
'seamless', 'seamlessNOT', 'seamlessly', 'search', 'searching', 'second', 'secretary', 'section', 'security',
'see', 'seeing', 'seem', 'seemed', 'seems', 'seen', 'seldom', 'select', 'selection', 'self', 'selfies', 'sel
l', 'selling', 'semana', 'semi', 'send', 'sending', 'sends', 'senior', 'sense', 'sensitive', 'sensitivity',
'sent', 'sentence', 'separate', 'separately', 'seprately', 'series', 'serious', 'seriously', 'serve', 'serve
d', 'service', 'servicesCant', 'set', 'setting', 'settingsHome', 'settins', 'settle', 'setup', 'sever', 'seve
ral', 'sewing', 'sf', 'shaking', 'shape', 'sharing', 'sharp', 'shell', 'shelled', 'shes', 'shifting', 'shin
e', 'shining', 'ship', 'shipment', 'shipped', 'shipping', 'shippingthank', 'shocked', 'shooting', 'shop', 'sh
opping', 'shoppingto', 'short', 'shortcoming', 'shorted', 'shorter', 'shortly', 'shouldnt', 'shout', 'show',
'showI', 'shower', 'showering', 'showing', 'shown', 'showno', 'showsIt', 'sht', 'shuffle', 'shut', 'shuts',
'shutting', 'sibling', 'side', 'sigh', 'sight', 'sign', 'silly', 'silver', 'similar', 'simple', 'simpler', 's
implicity', 'simplified', 'simplify', 'simply', 'simultaneously', 'sin', 'since', 'sing', 'singing', 'singl
e', 'sink', 'sinqued', 'siri', 'sister', 'sit', 'site', 'sits', 'sitting', 'situation', 'six', 'size', 'sizeM
y', 'sized', 'skeptical', 'skill', 'skillsjust', 'skip', 'sleek', 'sleep', 'sleeper', 'sleeping', 'sleepy',
'sliced', 'slide', 'slideshow', 'slight', 'slightly', 'slow', 'slowly', 'small', 'smaller', 'smart', 'smartbo
n', 'smarter', 'smarthome', 'smartphone', 'smarththing', 'smell', 'smooth', 'smoothly', 'snap', 'snarl', 'snea
ky', 'snooze', 'snoozed', 'soaking', 'soccer', 'social', 'socket', 'sofa', 'soft', 'softly', 'software', 'sol
d', 'solely', 'solid', 'solo', 'soluci', 'solution', 'solved', 'solves', 'somebody', 'somehow', 'someone', 's
omething', 'sometime', 'sometimes', 'somewhat', 'son', 'song', 'songsnot', 'soninlaw', 'soon', 'sooner', 'soo
o', 'sooooo', 'sooooooo', 'sorely', 'sorprendi', 'sorry', 'sort', 'sortof', 'soso', 'sound', 'soundGood', 'so
undI', 'soundIt', 'soundWhat', 'soundbar', 'sounded', 'sounding', 'soundlink', 'source', 'southern', 'spa',
'space', 'spacethe', 'spacing', 'spam', 'span', 'spanking', 'spark', 'speak', 'speaker', 'speakerI', 'speaker
stereo', 'speaking', 'speaknspell', 'speaks', 'speaktakes', 'spec', 'special', 'specially', 'specific', 'spec

ifically', 'specifily', 'specify', 'specifying', 'spectacular', 'speech', 'speed', 'speedy', 'spell', 'spelli
 ng', 'spend', 'spending', 'spent', 'spielI', 'spilled', 'spin', 'split', 'spoiled', 'spoke', 'spoken', 'spor
 t', 'spot', 'spotify', 'spouse', 'sprinkler', 'spur', 'spying', 'squarerectangular', 'squirm', 'sry', 'st',
 'staff', 'stage', 'staging', 'stair', 'stand', 'standalone', 'standard', 'standing', 'standsoutlikeasorethum
 b', 'star', 'starsI', 'start', 'started', 'starting', 'stat', 'state', 'statement', 'station', 'stationary',
 'stationed', 'stay', 'stayed', 'staying', 'steaming', 'steep', 'stellar', 'step', 'stepMy', 'stereo', 'stic
 k', 'stickWorks', 'still', 'stimulus', 'stink', 'stoled', 'stop', 'stopped', 'storage', 'store', 'storm', 'st
 ory', 'stove', 'straight', 'straightforward', 'strange', 'stream', 'streaming', 'streamline', 'strictly', 'st
 ring', 'strip', 'strong', 'strongly', 'structure', 'struggle', 'stubborn', 'stuck', 'student', 'stuff', 'stum
 p', 'stupid', 'sturdy', 'style', 'stylish', 'su', 'sub', 'subject', 'subpar', 'subscriber', 'subscribing', 's
 ubscription', 'subscriptionDoes', 'subsequently', 'substitute', 'success', 'successful', 'successfully', 'suc
 cessor', 'suck', 'suffer', 'sufficient', 'suggest', 'suggested', 'suggesting', 'suggestion', 'suggests', 'sui
 table', 'summoning', 'sunroom', 'super', 'superb', 'superior', 'supplied', 'supplying', 'support', 'supporte
 d', 'supporting', 'suppose', 'supposed', 'sure', 'surely', 'surface', 'surprise', 'surprised', 'surprising',
 'surprisingly', 'surroundlike', 'survived', 'sweet', 'swell', 'swipe', 'swiping', 'switch', 'switched', 'swit
 ching', 'sync', 'syncd', 'synced', 'synching', 'syncing', 'system', 'table', 'tablet', 'tad', 'tailor', 'tak
 e', 'taken', 'taking', 'tale', 'talk', 'talked', 'talking', 'tall', 'tap', 'tape', 'taping', 'tapped', 'tas
 k', 'taskThe', 'teacher', 'team', 'tear', 'tec', 'tech', 'techie', 'technical', 'technically', 'technician',
 'techno', 'technologically', 'technology', 'technologyI', 'techwe', 'teenager', 'teeth', 'telephone', 'televi
 sion', 'tell', 'telling', 'temp', 'temperature', 'tempting', 'ten', 'tend', 'tends', 'terminology', 'terribl
 e', 'terrificI', 'test', 'tested', 'testing', 'text', 'tg', 'tge', 'th', 'thank', 'thanks', 'thatI', 'thatW
 e', 'thats', 'theEcho', 'theater', 'theme', 'theory', 'there', 'therefore', 'thermostat', 'thermostatand', 't
 hestandbase', 'thete', 'theyre', 'thick', 'thing', 'thingmy', 'thingsBUY', 'thingsIt', 'think', 'thinking',
 'third', 'thirdparty', 'thisWon', 'thong', 'thorough', 'thoroughly', 'thou', 'though', 'thought', 'thousand',
 'three', 'thrilled', 'throughout', 'throw', 'thrown', 'thru', 'thunderstorm', 'ti', 'tickled', 'tie', 'tiempo
 horainformaci', 'tiene', 'til', 'till', 'time', 'timer', 'timermusic', 'timersthe', 'timework', 'timing', 'ti
 n', 'ting', 'tinker', 'tinkering', 'tinny', 'tiny', 'tip', 'tipping', 'tired', 'title', 'tocomplain', 'toda',
 'today', 'toddler', 'together', 'toilet', 'told', 'tomorrow', 'tomy', 'ton', 'tone', 'took', 'tool', 'tooth',
 'top', 'topic', 'total', 'totallly', 'totally', 'tou', 'touch', 'touching', 'touted', 'toward', 'towards', 't
 ower', 'town', 'toy', 'tplink', 'track', 'traditional', 'traffic', 'trailer', 'trained', 'trainee', 'trainin
 g', 'transferring', 'trav', 'travel', 'traveling', 'travelling', 'treadmill', 'treat', 'treble', 'trek', 'tri
 al', 'trick', 'tricky', 'tried', 'trigger', 'trip', 'trivia', 'trouble', 'troublefree', 'troubleshooting', 't
 roublesome', 'troubling', 'true', 'trueSetting', 'truly', 'trust', 'try', 'trying', 'tube', 'tulos', 'tune',
 'tunein', 'turn', 'turned', 'turning', 'tv', 'tvit', 'tweeter', 'twice', 'twist', 'twitter', 'two', 'twoThi
 s', 'ty', 'type', 'typeThe', 'typed', 'typical', 'typically', 'typing', 'u', 'udefulness', 'ugly', 'uhyour',
 'unable', 'unavailable', 'unbelievable', 'uncle', 'understand', 'understandIm', 'understanding', 'understand
 s', 'understood', 'unexpected', 'unfortunately', 'unhappy', 'unhelpful', 'unico', 'unimportant', 'uninstallre
 installreconfigure', 'unique', 'unit', 'universal', 'unless', 'unlike', 'unlimited', 'unlocking', 'unnannounc
 ed', 'unnecessary', 'unobtrusive', 'unplug', 'unplugged', 'unresponsive', 'unsettling', 'untapped', 'unusabl
 e', 'unused', 'unwitty', 'unwrapped', 'upA', 'upcoming', 'update', 'updated', 'updatesIt', 'updating', 'updw
 n', 'upgrade', 'upgraded', 'upgrading', 'upgreade', 'upload', 'uplove', 'upon', 'upset', 'upsetting', 'upstai
 rs', 'urge', 'us', 'usable', 'usage', 'usde', 'use', 'useI', 'useamazing', 'used', 'useful', 'usefulHalf', 'u
 sejust', 'useless', 'user', 'usesSometimes', 'using', 'usual', 'usually', 'utility', 'utilizaci', 'utilize',


```
'utilizing', 'v', 'vacation', 'vacuum', 'value', 'variant', 'variety', 'various', 'vast', 'vehicle', 'verba
l', 'verbalize', 'verbally', 'versa', 'versaI', 'versatile', 'versatility', 'verse', 'version', 'versus', 've
tted', 'vez', 'via', 'vibrating', 'vice', 'viceo', 'video', 'videoseven', 'view', 'viewed', 'viewing', 'viewi
ngIt', 'vintage', 'viola', 'virtual', 'virtually', 'visa', 'visible', 'vision', 'visit', 'visiting', 'visua
l', 'visuals', 'voice', 'voicecontrollable', 'voltage', 'volume', 'volumeYou', 'wait', 'waited', 'waiting',
'wake', 'wakeup', 'wakeword', 'waking', 'walk', 'walked', 'walking', 'wall', 'want', 'wantHad', 'wantWe', 'wa
nted', 'wanting', 'warehouse', 'warning', 'warns', 'warranty', 'wasconcerned', 'wasnt', 'waste', 'wasted', 'w
atch', 'watched', 'watching', 'water', 'waterIts', 'wattage', 'wave', 'waveIt', 'way', 'weak', 'wealth', 'wea
r', 'weary', 'weather', 'weathera', 'web', 'website', 'wedding', 'week', 'weekday', 'weekend', 'weekly', 'wei
ght', 'weird', 'welcome', 'well', 'wellAll', 'wellFour', 'wellGood', 'wellequalized', 'wellintegrated', 'wen
t', 'werent', 'weve', 'whatever', 'whats', 'whatsoever', 'whe', 'whenever', 'whenif', 'wherever', 'whether',
'whisper', 'whistle', 'white', 'who', 'whole', 'whose', 'wide', 'widespread', 'wife', 'wifi', 'wikipedia', 'w
illing', 'wind', 'window', 'wireless', 'wish', 'wished', 'wishing', 'withDislikes', 'within', 'without', 'wok
e', 'woken', 'wonder', 'wonderful', 'wonderfully', 'wont', 'woofer', 'word', 'work', 'workarounds', 'workat',
'worked', 'working', 'workingAlexa', 'workout', 'world', 'worried', 'worry', 'worseDon', 'worst', 'worth', 'w
orthless', 'would', 'wouldnt', 'writes', 'writing', 'wrong', 'x', 'xm', 'yale', 'yard', 'yeah', 'year', 'year
old', 'yell', 'yelling', 'yellow', 'yes', 'yesterday', 'yet', 'youd', 'youll', 'young', 'younger', 'younges
t', 'youre', 'youtube', 'yr', 'zero', 'zigbee', 'zonkedout', 'zwave', 'zzzz']
```

```
In [79]: #method 1 need to delete
def dummy_fun(doc):
    return doc

tfidf = TfidfVectorizer(

    tokenizer=dummy_fun,
    preprocessor=dummy_fun
)
```

```
In [ ]: # sample need to delete
from sklearn.feature_extraction.text import TfidfVectorizer
tfidfVect=TfidfVectorizer(max_features=1500,preprocessor=None,
    tokenizer=None,)

X=tfidfVect.fit_transform(data['verified_reviews']).toarray()
```

```
In [99]: X.shape
```

```
Out[99]: (3150, 4544)
```

```
In [ ]:
```

```
In [101]: from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(
    X, y, test_size=0.3, random_state=123)
```

```
In [ ]:
```

```
In [ ]:
```

```
In [ ]:
```

```
In [102]: from sklearn.naive_bayes import MultinomialNB
```

```
In [103]: MultiNB = MultinomialNB()
MultiNB.fit(X_train,y_train)
print(MultiNB)
y_pred = MultiNB.predict(X_test)

MultinomialNB()
```

```
In [104]: from sklearn.metrics import classification_report, confusion_matrix, precision_score, recall_score, f1_score, accuracy_score
print(classification_report(y_test, y_pred))
print('\n')
print('\n')
print('Confusion Matrix', confusion_matrix(y_test, y_pred))
print('\n')
print('\n')
print('Accuracy Score', accuracy_score(y_test, y_pred))
print('\n')
print('\n')
print('Precision Score', precision_score(y_test, y_pred))
print('\n')
print('\n')
print('Recall Score', recall_score(y_test, y_pred))
print('\n')
print('\n')
print('F1 Score', f1_score(y_test, y_pred))
```

	precision	recall	f1-score	support
0	0.00	0.00	0.00	76
1	0.92	1.00	0.96	869
accuracy			0.92	945
macro avg	0.46	0.50	0.48	945
weighted avg	0.85	0.92	0.88	945

Confusion Matrix [[0 76]
[0 869]]

Accuracy Score 0.9195767195767196

Precision Score 0.9195767195767196

Recall Score 1.0

F1 Score 0.958103638368247

C:\Users\arvak\Anaconda3\lib\site-packages\sklearn\metrics_classification.py:1221: UndefinedMetricWarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use `zero_division` parameter to control this behavior.

_warn_prf(average, modifier, msg_start, len(result))

Conclusion and Future work: