In [2]:
```
#Basic Imports
import pandas as pd
import numpy as np
```

In [3]:
```
#sklearn imports
from sklearn.model_selection import train_test_split
from sklearn.pipeline import Pipeline
from sklearn import feature_extraction, model_selection, naive_bayes, pipeline, manifold, preprocessing
from sklearn.pipeline import Pipeline
from sklearn.dummy import DummyClassifier
from sklearn.utils import class_weight
from sklearn.feature_extraction.text import TfidfVectorizer, CountVectorizer
```

In [4]:
```
from keras.layers import LSTM,Dense,Dropout,Embedding,CuDNNLSTM,Bidirectional
```

In [5]:
```
from skopt import BayesSearchCV
from sklearn.model_selection import GridSearchCV
from skopt.space import Real, Categorical, Integer
from sklearn.metrics import fbeta_score, make_scorer
from keras_preprocessing.sequence import pad_sequences
from keras.callbacks import EarlyStopping
from sklearn.metrics import confusion_matrix, ConfusionMatrixDisplay
from matplotlib import pyplot
from sklearn.metrics import roc_curve
from sklearn.metrics import roc_auc_score
```

In [6]:
```
from tensorflow import keras
```

In [7]:
```
import matplotlib.pyplot as plt
import seaborn as sns
from wordcloud import WordCloud
from tqdm import tqdm
```

In [10]:
```
import sys

sys.path.insert(0, '/Users/seanyboy/Documents/Flatiron/Phase_4/Twitter_Sentiment_Project/Helper_Functions')
import functions as fn
```

```
[nltk_data] Downloading package averaged_perceptron_tagger to
[nltk_data]     /Users/seanyboy/nltk_data...
[nltk_data]   Package averaged_perceptron_tagger is already up-to-
[nltk_data]       date!
```

In [11]:
```
from tensorflow.keras import Sequential
from tensorflow.keras import layers
```

In [12]:
```
import nltk
from nltk.corpus import stopwords, wordnet
from nltk.tokenize import regexp_tokenize, word_tokenize, RegexpTokenizer
from nltk.stem import WordNetLemmatizer
from nltk import  word_tokenize
from gensim.models import word2vec
from nltk import pos_tag
from keras.preprocessing.text import Tokenizer
```

Import Dataset with Additional Negative Examples

In [64]:
```
new_df = pd.read_csv('additional_negs')
```

In [65]:
```
new_df['processed_text'] = fn.Process_Tweet(new_df['tweet_text'],remove_HTML=True,replace_moji_bake=True,strip_
```

```
/opt/anaconda3/envs/learn-env/lib/python3.8/site-packages/bs4/__init__.py:435: MarkupResemblesLocatorWarning: T
he input looks more like a filename than markup. You may want to open this file and pass the filehandle into Be
autiful Soup.
  warnings.warn(
```

Adjusting Target Values

In [66]:
```
#Combinging Neutral and Positive Values
new_df['Sentiment']=new_df['Sentiment'].replace({"Positive": 0, "Negative": 1, "Neutral": 3}).astype(np.uint8)
#Setting the Minority Class Negative as the Value of "1"
new_df['Sentiment']=new_df['Sentiment'].replace(3,0).copy()
```

In [67]:
```
# new_df = new_df[new_df['Sentiment']!='Neutral']
```

In [68]:
```
new_df['Sentiment'].value_counts(normalize=True)
```

Out[68]:
```
0    0.823831
1    0.176169
Name: Sentiment, dtype: float64
```

Tokenizing and Lemmatization

At this step I will again perform the same lemmatization performed on the traditional models. I will not use the same pipeline as it creates TFIDF vectors. I will be using the pretrained GLOVE vectors.

In [69]:
```
#Import Stopwords
sw = stopwords.words('english')
len(sw)
```

Out[69]:
```
179
```

There are a 179 stopwords in this list, I may experiment with adding stopwords at some point.

In [70]:
```
len(sw)
```

Out[70]:
```
179
```

In [71]:
```
from keras.preprocessing.text import Tokenizer

t  = Tokenizer()
```

In [72]:
```
from sklearn.feature_extraction.text import TfidfVectorizer
```

In [73]:
```
tokenizer = TfidfVectorizer.build_tokenizer
```

In [74]:
```
new_df['processed_text']
```

Out[74]:
```
0         I have a  three G iPhone. After  three  hrs t...
1         Know about  ? Awesome iPad/iPhone app that yo...
2         Can not wait for #iPad  two  also. They shoul...
3         I hope this year's festival is not as crashy ...
4         great stuff on Fri #SXSW: Marissa Mayer (Goog...
                               ...
10150    RT : Thinking of upgrading to #Yosemite? Think...
10151               why is not group facetime a thing  wtf
10152    Being held hostage at  - They are replacing th...
10153    hey  is it normal for my laptop charger to be ...
10154    My iPhone  five 's photos are no longer downlo...
Name: processed_text, Length: 10155, dtype: object
```

In [75]:
```
new_df
```

Out[75]:

	tweet_text	Product	Sentiment	processed_text
0	.@wesley83 I have a 3G iPhone. After 3 hrs twe...	iPhone	1	I have a three G iPhone. After three hrs t...
1	@jessedee Know about @fludapp ? Awesome iPad/i...	iPad or iPhone App	0	Know about ? Awesome iPad/iPhone app that yo...
2	@swonderlin Can not wait for #iPad 2 also. The...	iPad	0	Can not wait for #iPad two also. They shoul...
3	@sxsw I hope this year's festival isn't as cra...	iPad or iPhone App	1	I hope this year's festival is not as crashy ...
4	@sxtxstate great stuff on Fri #SXSW: Marissa M...	Google	0	great stuff on Fri #SXSW: Marissa Mayer (Goog...
...	...	...	...	...
10150	RT @Ecofantasy: Thinking of upgrading to #Yose...	Apple	1	RT : Thinking of upgrading to #Yosemite? Think...
10151	why isnt group facetime a thing @apple wtf	Apple	1	why is not group facetime a thing wtf
10152	Being held hostage at @apple - They are replac...	Apple	1	Being held hostage at - They are replacing th...
10153	hey @apple is it normal for my laptop charger ...	Apple	1	hey is it normal for my laptop charger to be ...
10154	My iPhone 5's photos are no longer downloading...	Apple	1	My iPhone five 's photos are no longer downlo...

10155 rows × 4 columns

In [76]:
```
def get_wordnet_pos(treebank_tag):
    '''
    Translate nltk POS to wordnet tags
    '''
    if treebank_tag.startswith('J'):
        return wordnet.ADJ
    elif treebank_tag.startswith('V'):
        return wordnet.VERB
    elif treebank_tag.startswith('N'):
        return wordnet.NOUN
    elif treebank_tag.startswith('R'):
        return wordnet.ADV
    else:
        return wordnet.NOUN
```

I will take advantage of the doc preparer function that takes in a the words from the dataset and replaces any remaining punctuation, removes stopwords, and lemmatizes the words in the dataset.

In [77]:
```
def doc_preparer(doc, stop_words=sw):
    '''

    :param doc: a document from a corpus
    :return: a document string with words which have been
            lemmatized,
            parsed for stopwords,
            made lowercase,
            and stripped of punctuation and numbers.
    '''

    regex_token = RegexpTokenizer(r"([a-zA-Z]+(?:’[a-z]+)?)")
    doc = regex_token.tokenize(doc)
    doc = [word.lower() for word in doc]
    doc = [word for word in doc if word not in sw]
#     doc = pos_tag(doc)
#     doc = [(word[0], get_wordnet_pos(word[1])) for word in doc]
#     lemmatizer = nltk.stem.wordnet.WordNetLemmatizer()
#     doc = [lemmatizer.lemmatize(word[0], word[1]) for word in doc]
    return doc
```

In [78]:
```
# new_df['processed_text']=[doc_preparer(doc, sw) for doc in new_df['processed_text']]
```

In [79]:
```
new_df.head(5)
```

Out[79]:

	tweet_text	Product	Sentiment	processed_text
0	.@wesley83 I have a 3G iPhone. After 3 hrs twe...	iPhone	1	I have a three G iPhone. After three hrs t...
1	@jessedee Know about @fludapp ? Awesome iPad/i...	iPad or iPhone App	0	Know about ? Awesome iPad/iPhone app that yo...
2	@swonderlin Can not wait for #iPad 2 also. The...	iPad	0	Can not wait for #iPad two also. They shoul...
3	@sxsw I hope this year's festival isn't as cra...	iPad or iPhone App	1	I hope this year's festival is not as crashy ...
4	@sxtxstate great stuff on Fri #SXSW: Marissa M...	Google	0	great stuff on Fri #SXSW: Marissa Mayer (Goog...

In [80]:
```
new_df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10155 entries, 0 to 10154
Data columns (total 4 columns):
 #   Column          Non-Null Count  Dtype 
---  ------          --------------  ----- 
 0   tweet_text      10155 non-null  object
 1   Product         4501 non-null   object
 2   Sentiment       10155 non-null  uint8 
 3   processed_text  10155 non-null  object
dtypes: object(3), uint8(1)
memory usage: 248.0+ KB
```

Adding Glove Word Embeddings

Train/Test Split

In [81]:
```
new_df['processed_text']
```

Out[81]:
```
0         I have a  three G iPhone. After  three  hrs t...
1         Know about  ? Awesome iPad/iPhone app that yo...
2         Can not wait for #iPad  two  also. They shoul...
3         I hope this year's festival is not as crashy ...
4         great stuff on Fri #SXSW: Marissa Mayer (Goog...
                               ...
10150    RT : Thinking of upgrading to #Yosemite? Think...
10151               why is not group facetime a thing  wtf
10152    Being held hostage at  - They are replacing th...
10153    hey  is it normal for my laptop charger to be ...
10154    My iPhone  five 's photos are no longer downlo...
Name: processed_text, Length: 10155, dtype: object
```

In [82]:
```
X = new_df['processed_text']
y = new_df['Sentiment']
```

In [83]:
```
len(X)
```

Out[83]:
```
10155
```

In [84]:
```
#Splitting First into a Train Set and Remaing Data Set
X_train, X_rem, y_train, y_rem = train_test_split(X,y, train_size=0.8,random_state=42,stratify=y)
```

In [85]:
```
#SPlitting the Remaining Data into Validation and Test Data
X_val, X_test, y_val, y_test = train_test_split(X_rem,y_rem, test_size=0.5,random_state=42,stratify=y_rem)
```

In [86]:
```
len(X_val)
```

Out[86]:
```
1015
```

I have split the data twice, the holdout data will be the final data to test on for all the models that I will attempt.

Tokenizing for Glove Model

In [87]:
```
X_train_tokens=[doc_preparer(doc, sw) for doc in X_train]
X_val_tokens = [doc_preparer(doc, sw) for doc in X_val]
X_test_tokens = [doc_preparer(doc,sw) for doc in X_test]
```

In [88]:
```
X_train_tokens
```

```
Out[88]: [['sxsw',
           'mistakes',
           'made',
           'building',
           'netflix',
           'iphone',
           'plus',
           'see',
           'source',
           'code'],
          ['great',
           'visualisation',
           'ghost',
           'movement',
           'logic',
           'pacman',
           'google',
           'doodles',
           'session',
           'sxsw',
           'details'],
          ['iphone',
           'worries',
           'drop',
           'one',
           'venues',
           'talk',
           'concierge',
           'take',
           'care',
           'sxsw',
           'sxswi'],
          ['heard',
           'downtown',
           'location',
           'sold',
           'one',
           'merchandise',
           'last',
           'night',
           'sxsw',
           'apple',
           'ipad',
           'two'],
          ['google',
           'tweet',
           'new',
           'think',
           'speak',
           'mark',
           'belinsky',
           'nine',
           'hundred',
           'eleven',
           'tweets',
           'panel',
           'sxsw'],
          ['sxsw',
           'recap',
           'day',
           'four',
           'greaaat',
           'exploring',
           'brand',
           'mascots',
           'digital',
           'age',
           'sxsw',
           'hotsheet'],
          ['okay',
           'fair',
           'enough',
           'lining',
           'new',
           'tech',
           'cost',
           'sxsw',
           'much',
           'better',
           'new',
           'ipad'],
          ['rt',
           'saw',
           'lax',
           'heading',
           'sxsw',
           'wife',
           'iphone',
           'ipad',
           'download',
           'app',
           'freespeech'],
          ['met',
           'three',
           'girls',
           'apple',
           'itunes',
           'connect',
           'team',
           'iphone',
           'developer',
           'meetup',
           'got',
           'two',
           'talk',
           'would',
           'change',
           'itc',
           'sxsw'],
          ['apple', 'v', 'android', 'things', 'going', 'tomorrow', 'sxsw'],
          ['pdx',
           'sxsw',
           'tomorrow',
           'drop',
           'note',
           'tmsxsw',
           'apple',
           'pop',
           'retail',
           'store',
           'epicenter',
           'madness'],
          ['rt',
           'marissa',
           'mayer',
           'forty',
           'google',
           'maps',
           'usage',
           'mobile',
           'one',
           'hundred',
           'fifty',
           'million',
           'mobileusers',
           'sxsw'],
          ['rt',
           'google',
           'preview',
           'major',
           'new',
           'social',
           'service',
           'called',
           'google',
           'circles',
           'today',
           'sxsw'],
          ['lmfao',
           'rt',
           'cocky',
           'ass',
           'apple',
           'talking',
           'bout',
           'da',
           'fruit',
           'fuck'],
          ['rt',
           'around',
           'sxsw',
           'need',
           'us',
           'sim',
           'iphone',
           'three',
           'gs',
           'next',
           'ten',
           'want',
           'bring',
           'one',
           'please'],
          ['vatornews', 'google', 'apple', 'force', 'print', 'media', 'evolve', 'sxsw'],
          ['companies',
           'watch',
           'sxsw',
           'trade',
           'show',
           'floor',
           'apps',
           'features',
           'hardware',
           'ipad',
           'iphone'],
          ['rt',
           'sxsw',
           'apple',
           'pop',
           'store',
           'nuts',
           'still',
           'packed',
           'eleven',
           'thirty'],
          ['omg',
           'rumor',
           'apple',
           'opening',
           'temporary',
           'store',
           'downtown',
           'austin',
           'sxsw',
           'ipad',
           'two',
           'launch'],
          ['queue', 'apple', 'pop', 'store', 'sxsw'],
          ['rt',
           'head',
           'one',
           'pm',
           'cst',
           'today',
           'win',
           'vip',
           'access',
           'acoustic',
           'solo',
           'set',
           'sxsw',
           'tonight'],
          ['sxsw',
           'look',
           'blue',
           'hair',
           'got',
           'free',
           'android',
           'phone',
           'info',
           'stickers',
           'allhat',
           'three'],
          ['checking',
           'staying',
           'alive',
           'indie',
           'iphone',
           'game',
           'development',
           'survive',
           'sxsw',
           'stayingalive'],
          ['face'],
          ['best',
           'iphone',
           'accessory',
           'sxsw',
           'rockstache',
           'techsmith',
           'istache',
           'via'],
          ['barry',
           'diller',
           'newsbeast',
           'merger',
           'might',
           'work',
           'barry',
           'diller',
           'news',
           'barry',
           'diller',
           'iac',
           'newsweek',
           'sxsw',
           'cyber',
           'iphone'],
          ['know',
           'selling',
           'never',
           'talked',
           'hate',
           'product',
           'rt',
           'check',
           'heyo',
           'four',
           'iphone',
           'sxsw',
           'sxswi'],
          ['rt', 'winning', 'picture', 'android', 'google', 'sxsw'],
          ['sxxpress', 'line', 'almost', 'long', 'apple', 'line', 'sxsw'],
          ['apple',
           'opening',
           'temporary',
           'store',
           'austin',
           'sxsw',
           'people',
           'obviously',
           'want',
           'one',
           'thousand',
           'five',
           'hundred',
           'macbook',
           'visiting',
           'austin'],
          ['new',
           'mike',
           'tyson',
           'game',
           'coming',
           'iphone',
           'iphone',
           'sxsw',
           'videogames',
           'tyson',
           'art',
           'cartoon'],
          ['rt', 'apple', 'set', 'open', 'popup', 'shop', 'core', 'sxsw', 'action'],
          ['rt',
           'enchantment',
           'get',
           'trustworthiness',
           'zappos',
           'likeability',
           'virgin',
           'product',
           'apple',
           'sxsw'],
          ['iphone',
           'one',
           'hand',
           'caramel',
           'macchiato',
           'ouch',
           'hiss',
           'hot',
           'apparently',
           'two',
           'pumps',
           'lava',
           'begins',
           'sxsw',
           'tmsxsw'],
          ['smmnextgen',
           'tools',
           'cheap',
           'google',
           'analytics',
           'excel',
           'buzzmetrics',
           'also',
           'radian',
           'six',
           'altimeter',
           'sxsw',
           'sloansxsw'],
          ['anyone',
           'suggestions',
           'getting',
           'mobile',
           'prepaid',
           'data',
           'work',
           'iphone',
           'phone',
           'txt',
           'working',
           'sxsw'],
          ['realize',
           'still',
           'padless',
           'gave',
           'away',
           'case',
           'bmm',
           'need',
           'win',
           'next',
           'ipad',
           'first',
           'sxsw'],
          ['warning',
           'buy',
           'iphone',
           'five',
           'unlocked',
           'iphone',
           'cannot',
           'use',
           'verizon',
           'network'],
          ['google', 'body', 'beta', 'uber', 'sxsw', 'health', 'two', 'dev', 'cool'],
          ['google',
           'reveal',
           'new',
           'social',
           'network',
           'called',
           'circles',
           'google',
           'facebook',
           'twitter',
           'sxsw'],
          ['rt', 'phone', 'suck', 'much'],
          ['hey', 'phone', 'dying', 'charger', 'stuff', 'sucks'],
          ['rt', 'two', 'sxsw', 'apple', 'opening', 'pop', 'store', 'austin', 'sxsw'],
          ['block',
           'party',
           'capitalism',
           'ballroom',
           'f',
           'sxsw',
           'went',
           'google',
           'thing',
           'last',
           'session',
           'first',
           'choice',
           'full'],
          ['rt',
           'front',
           'gate',
           'tickets',
           'present',
           'morning',
           'party',
           'three',
           'eighteen',
           'sxsw',
           'music'],
          ['rt',
           'woah',
           'expect',
           'google',
           'circles',
           'today',
           'sxsw',
           'google',
           'league',
           'extraordinary',
           'hackers',
           'events',
           'today',
           'big'],
          ['rt',
           'tonight',
           'checking',
           'kills',
           'checking',
           'gsd',
           'google',
           'party',
           'come',
           'say',
           'hi',
           'sxsw',
           'sxswi'],
          ['apple',
           'two',
           'austin',
           'stores',
           'week',
           'downtown',
           'presence',
           'changes',
           'sxsw',
           'popup',
           'store'],
          ['going',
           'leave',
           'sxsw',
           'tomorrow',
           'five',
           'pm',
           'go',
           'purchase',
           'ipad',
           'two',
           'map',
           'store'],
          ['driving',
           'around',
           'austin',
           'google',
           'street',
           'view',
           'scoping',
           'locations',
           'desk',
           'sxsw'],
          ['sounds',
           'good',
           'look',
           'forward',
           'learning',
           'quick',
           'google',
           'learn',
           'also',
           'produced',
           'sxsw'],
          ['man',
           'panhandling',
           'ipad',
           'two',
           'sxsw',
           'world',
           'coming',
           'ipad',
           'two',
           'sxsw'],
          ['funniest',
           'question',
           'google',
           'marissa',
           'mayer',
           'talk',
           'sxsw',
           'hi',
           'marissa',
           'um',
           'guys',
           'hiring'],
          ['yo', 'sxsw', 'iphone', 'app', 'illa', 'def', 'go'],
          ['google',
           'preview',
           'new',
           'social',
           'network',
           'called',
           'circles',
           'sxsw',
           'interactive',
           'today',
           'google',
           'social',
           'sxsw',
           'circles'],
          ['win',
           'free',
           'ipad',
           'two',
           'webdoc',
           'com',
           'sxsw',
           'rt',
           'awesome',
           'tech',
           'right'],
          ['sucks', 'know', 'cost', 'dollars', 'us', 'four', 'hundred'],
          ['ran',
           'gauntlet',
           'get',
           'seat',
           'ipad',
           'design',
           'talk',
           'expect',
           'overflowing',
           'sxsw'],
          ['rt', 'win', 'free', 'ipad', 'two', 'webdoc', 'com', 'sxsw', 'rt'],
          ['google',
           'circles',
           'google',
           'social',
           'network',
           'rumored',
           'launching',
           'today',
           'sxsw'],
          ['google', 'aclu', 'eighty', 'party', 'sxsw'],
          ['new', 'update', 'android', 'week', 'debuting', 'sxsw', 'go'],
          ['apple',
           'tumbles',
           'much',
           'six',
           'percent',
           'unusual',
           'trading',
           'aapl',
           'aapl'],
          ['technology',
           'even',
           'begins',
           'apple',
           'wins',
           'sxsw',
           'past',
           'week',
           'major',
           'dilemma',
           'tech'],
          ['another', 'fucking', 'software', 'update', 'really'],
          ['rt', 'google', 'maps', 'mobile', 'five', 'two', 'looks', 'awesome', 'sxsw'],
          ['hootsuite', 'mobile', 'sxsw', 'updates', 'iphone', 'blackberry', 'android'],
          ['time',
           'coffee',
           'muffins',
           'news',
           'reading',
           'lenewz',
           'sxsw',
           'trade',
           'show',
           'booth',
           'one',
           'thousand',
           'four',
           'hundred',
           'twenty',
           'two',
           'behind',
           'google'],
          ['rt',
           'epicurious',
           'flipboard',
           'cnn',
           'wired',
           'moma',
           'examples',
           'good',
           'ipad',
           'design',
           'sxsw'],
          ['creativity',
           'prompt',
           'use',
           'google',
           'maps',
           'virtually',
           'take',
           'walk',
           'used',
           'take',
           'kid',
           'see',
           'memories',
           'come',
           'courtesy',
           'sxsw'],
          ['rt',
           'fyi',
           'breaking',
           'google',
           'launch',
           'major',
           'new',
           'social',
           'network',
           'called',
           'circles',
           'today',
           'via',
           'sxsw',
           'socialmedia'],
          ['cc',
           'rt',
           'new',
           'ubersocial',
           'iphone',
           'app',
           'store',
           'includes',
           'uberguide',
           'sxsw',
           'cont'],
          ['bought',
           'ipad',
           'two',
           'yet',
           'going',
           'sxsw',
           'check',
           'apple',
           'pop',
           'store'],
          ['smtravel',
           'heard',
           'google',
           'plans',
           'launch',
           'socnet',
           'may',
           'circles',
           'learned',
           'lot',
           'five',
           'years',
           'lots',
           'changed',
           'via',
           'sxsw'],
          ['adaptive',
           'retail',
           'apple',
           'open',
           'pop',
           'shop',
           'sxsw',
           'skillfully',
           'done',
           'cupertino'],
          ['anyone',
           'know',
           'fix',
           'xcode',
           'simulators',
           'tried',
           'complete',
           'reinstall',
           'ios'],
          ['sxsw', 'monster', 'mash', 'ipad', 'plush', 'giveaway'],
          ['damn', 'commercials', 'getting', 'worse', 'worse'],
          ['marissa',
           'mayer',
           'forty',
           'google',
           'maps',
           'usage',
           'mobile',
           'one',
           'hundred',
           'fifty',
           'million',
           'mobileusers',
           'via',
           'sxsw',
           'goog'],
          ['thank',
           'tweet',
           'japan',
           'sxsw',
           'trying',
           'get',
           'donation',
           'booth',
           'iphone',
           'plz',
           'help'],
          ['rt',
           'sure',
           'total',
           'scene',
           'rt',
           'spoke',
           'austin',
           'apple',
           'store',
           'cautiously',
           'optimistic',
           'nerd',
           'sxsw'],
          ['cool',
           'apple',
           'sets',
           'five',
           'zero',
           'sq',
           'ft',
           'temporary',
           'store',
           'sxsw',
           'sell',
           'ipad',
           'two'],
          ['hey', 'even', 'thinking', 'fixing', 'wifi', 'issues', 'yosemiteproblems'],
          ['rt',
           'sxsw',
           'apple',
           'comes',
           'cool',
           'technology',
           'one',
           'ever',
           'heard',
           'go',
           'conferences'],
          ['please',
           'rt',
           'follow',
           'next',
           'big',
           'college',
           'social',
           'network',
           'chance',
           'win',
           'ipad',
           'seven',
           'zero',
           'followers',
           'socialmedia',
           'sxsw'],
          ['ten',
           'minute',
           'line',
           'ipad',
           'two',
           'temporary',
           'apple',
           'store',
           'sxsw'],
          ['amused',
           'apple',
           'pop',
           'store',
           'sxsw',
           'year',
           'brilliant',
           'idea',
           'brilliant'],
          ['google',
           'knows',
           'everything',
           'map',
           'people',
           'traffic',
           'around',
           'world',
           'sxtxstate',
           'sxsw'],
          ['sxsw',
           'today',
           'iphone',
           'game',
           'celeb',
           'brand',
           'destination',
           'marketing'],
          ['apple', 'open', 'temporary', 'store', 'sxsw', 'six', 'th', 'congress'],
          ['rt',
           'google',
           'launch',
           'major',
           'new',
           'social',
           'network',
           'called',
           'circles',
           'possibly',
           'today',
           'updated',
           'sxsw'],
          ['dear',
           'want',
           'xmas',
           'ios',
           'eight',
           'stop',
           'crashing',
           'ipad',
           'signed',
           'cindy',
           'lou',
           'whoville',
           'apple'],
          ['omarg',
           'rumor',
           'apple',
           'opening',
           'temporary',
           'store',
           'downtown',
           'austin',
           'sxsw',
           'ipad',
           'two',
           'launch'],
          ['tm',
           'litle',
           'girl',
           'wants',
           'ipad',
           'guess',
           'got',
           'get',
           'one',
           'sxsw',
           'checked',
           'apple',
           'pop',
           'store'],
          ['drop',
           'audio',
           'rendition',
           'requirement',
           'ios',
           'apps',
           'users',
           'hate',
           'stores',
           'want',
           'platforms',
           'know'],
          ['going',
           'sxsw',
           'today',
           'share',
           'photos',
           'video',
           'ireport',
           'cnn',
           'iphone',
           'app'],
```

```
['cannot',
 'talk',
 'liquid',
 'exp',
 'without',
 'talking',
 'kindle',
 'showing',
 'examples',
 'web',
 'kindle',
 'iphone',
 'versions',
 'liquidux',
 'sxsw'],
['even', 'real', 'fucking', 'apple', 'company', 'fuck', 'supposed'],
['rt',
 'march',
 'eleven',
 'austin',
 'tx',
 'people',
 'line',
 'sxsw',
 'registration',
 'apple',
 'store'],
['rt', 'internet', 'blurs', 'ipad', 'fades', 'sxsw'],
['rt',
 'win',
 'sony',
 'xperia',
 'play',
 'android',
 'phone',
 'sxsw',
 'tuesday',
 'three',
 'fifteen',
 'details'],
['millions',
 'dollars',
 'saved',
 'one',
 'company',
 'adoption',
 'google',
 'docs',
 'incenticize',
 'teams',
 'evolvingworkplace',
 'sxsw'],
['get', 'ipad', 'two', 'sxsw', 'yes', 'depressed'],
['suggestions', 'iphone', 'extended', 'battery', 'packs', 'sxsw'],
['leaving',
 'bag',
 'home',
 'today',
 'traveling',
 'light',
 'ipad',
 'hand',
 'really',
 'need',
 'lug',
 'around',
 'impedimenta',
 'sxsw'],
['everyone',
 'already',
 'one',
 'anti',
 'theft',
 'protection',
 'leave',
 'laptop',
 'ipad',
 'go',
 'get',
 'latte',
 'sxsw'],
['massive',
 'lines',
 'sxsw',
 'apple',
 'store',
 'agree',
 'wait',
 'perhaps',
 'late',
 'early',
 'adopter'],
['rt',
 'rt',
 'per',
 'rumor',
 'google',
 'may',
 'preview',
 'big',
 'social',
 'strategy',
 'eighty',
 'themed',
 'costume',
 'party',
 'sxsw',
 'yep',
 'cn'],
['apple',
 'set',
 'open',
 'popup',
 'shop',
 'austin',
 'six',
 'th',
 'con',
 'sxsw',
 'via',
 'sxsw',
 'sxswprsa',
 'prsa'],
['japan',
 'docomo',
 'introduced',
 'mobile',
 'apps',
 'six',
 'years',
 'apple',
 'came',
 'app',
 'store',
 'jpmobilesummit',
 'sxsw'],
['google', 'circles', 'true', 'competitor', 'social', 'realm', 'cc', 'sxsw'],
['waited',
 'finished',
 'dissertating',
 'install',
 'yosemite',
 'aging',
 'macbook',
 'yikes',
 'icons',
 'sure',
 'ugly'],
['eventful', 'day', 'earthquake', 'tsunami', 'ipad', 'two', 'plus', 'sxsw'],
['pressure',
 'ahem',
 'excuse',
 'buy',
 'mounts',
 'rt',
 'ipad',
 'two',
 'must',
 'gadget',
 'sxsw',
 'via'],
['happy'],
['grab', 'latest', 'sxsw', 'saytextson'],
['apple', 'heads', 'sxsw', 'sets', 'temporary', 'store', 'austin'],
['ipad',
 'upgrade',
 'newest',
 'ios',
 'yet',
 'tweetdeck',
 'unstable',
 'nten',
 'eleven',
 'ntc',
 'sxsw',
 'sxswi'],
['inventing', 'dislike', 'button', 'ipad', 'two', 'lines', 'sxsw'],
['thank',
 'insight',
 'sxsw',
 'japan',
 'panels',
 'google',
 'translate',
 'another',
 'tab',
 'read'],
['sxsw',
 'mistakes',
 'made',
 'building',
 'netflix',
 'iphone',
 'plus',
 'see',
 'source',
 'code',
 'via'],
['prepping',
 'attending',
 'sxsw',
 'without',
 'iphone',
 'dehumanizing',
 'experience'],
['apple',
 'set',
 'open',
 'pop',
 'shop',
 'sxsw',
 'interactive',
 'conference',
 'apple',
 'ipad',
 'two',
 'marketing',
 'media'],
['dinner',
 'last',
 'night',
 'left',
 'computer',
 'charge',
 'fire',
 'happened',
 'would',
 'house',
 'applecordfire'],
['google',
 'connect',
 'digital',
 'physical',
 'worlds',
 'mobile',
 'sxsw',
 'rt'],
['rt',
 'going',
 'austin',
 'sxsw',
 'austin',
 'guide',
 'iphone',
 'free',
 'mar',
 'nine',
 'fifteen',
 'lp'],
['point', 'anger', 'simply', 'manifestation', 'stupid'],
['video', 'playbook', 'action', 'sxsw', 'ipad', 'still', 'wins'],
['deleted', 'ipod', 'music', 'rival', 'services'],
['rt',
 'google',
 'quash',
 'circles',
 'rumours',
 'rt',
 'launching',
 'products',
 'sxsw',
 'plenty',
 'else',
 'ht'],
['rt',
 'going',
 'sxsw',
 'wish',
 'could',
 'purchase',
 'ipad',
 'two',
 'worry',
 'well',
 'played',
 'apple',
 'well',
 'played'],
['flipboard', 'next', 'platform', 'iphone', 'ceo', 'says', 'sxsw'],
['ipad',
 'device',
 'moment',
 'wireless',
 'power',
 'next',
 'essential',
 'technology',
 'api',
 'king',
 'sxsw'],
['saw',
 'first',
 'ipad',
 'two',
 'user',
 'toocan',
 'tell',
 'white',
 'one',
 'sxsw',
 'apple',
 'iminfanboycentral'],
['rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'possibly',
 'today',
 'sxsw'],
['technews',
 'man',
 'panhandling',
 'ipad',
 'two',
 'sxsw',
 'world',
 'coming',
 'tech',
 'news',
 'ipad',
 'two',
 'sxsw',
 'tech'],
['saw',
 'article',
 'group',
 'texting',
 'check',
 'smyle',
 'android',
 'web',
 'apps',
 'features',
 'group',
 'chat',
 'whiteboard',
 'sxsw'],
['mark',
 'zuckerberg',
 'slams',
 'tim',
 'cook',
 'alignment',
 'customers',
 'fb',
 'aapl'],
['one',
 'sxsw',
 'panel',
 'moderator',
 'europe',
 'says',
 'spent',
 'three',
 'thousand',
 'roaming',
 'charges',
 'iphone',
 'sxsw',
 'two',
 'thousand',
 'ten'],
['sxsw',
 'crowd',
 'swarms',
 'ipad',
 'two',
 'launch',
 'via',
 'sxsw',
 'two',
 'thousand',
 'eleven',
 'apple'],
['yo',
 'auto',
 'correct',
 'shit',
 'got',
 'stop',
 'changing',
 'shit',
 'right',
 'send'],
['rt',
 'sxsw',
 'twenty',
 'google',
 'searches',
 'local',
 'info',
 'marissa',
 'mayer',
 'six',
 'million',
 'places',
 'claimed',
 'owners',
 'logged',
 'google'],
['ran', 'temporary', 'apple', 'store', 'amy', 'sxsw'],
['crowley',
 'says',
 'hard',
 'feelings',
 'towards',
 'google',
 'dodgeball',
 'experience',
 'says',
 'would',
 'good',
 'partner',
 'sxsw',
 'checkins'],
['ipad',
 'two',
 'contest',
 'join',
 'actsofsharing',
 'com',
 'start',
 'getting',
 'friends',
 'connected',
 'user',
 'friends',
 'city',
 'end',
 'sxsw',
 'wins'],
['lego',
 'mindstorm',
 'battle',
 'bots',
 'google',
 'superhappydevhouse',
 'sxsw'],
['blackberry',
 'users',
 'must',
 'feel',
 'like',
 'losers',
 'sxsw',
 'clearly',
 'iphone',
 'crowd',
 'baby'],
['orly',
 'google',
 'set',
 'launch',
 'new',
 'social',
 'network',
 'circles',
 'today',
 'sxsw'],
['impressed',
 'far',
 'ipad',
 'two',
 'slim',
 'form',
 'instant',
 'ness',
 'seen',
 'tried',
 'one',
 'yet',
 'sxsw',
 'sxswi'],
['rt',
 'win',
 'awesome',
 'ipad',
 'quibids',
 'custom',
 'case',
 'catch',
 'sxsw',
 'wearing',
 'openbeta',
 'vip',
 'badge'],
['almost',
 'bring',
 'ipad',
 'sxsw',
 'b',
 'c',
 'one',
 'st',
 'gen',
 'lunch',
 'wondering',
 'sxsw',
 'hipster',
 'uniform',
 'year',
 'fb'],
['rt',
 'apple',
 'autocorrect',
 'weird',
 'ogilvy',
 'autocorrects',
 'idiocy',
 'ogilvynotes',
 'sxsw'],
['agree',
 'rt',
 'wait',
 'fiona',
 'apple',
 'town',
 'somebody',
 'kidnap',
 'put',
 'recording',
 'studio',
 'records',
 'new',
 'album',
 'sxsw'],
['one',
 'hundred',
 'seventy',
 'pictures',
 'storage',
 'full',
 'get',
 'together'],
['sxsw',
 'sixty',
 'four',
 'gb',
 'ipad',
 'two',
 'three',
 'g',
 'paypal',
 'right'],
['sxsw',
 'meet',
 'author',
 'host',
 'android',
 'devs',
 'sat',
 'twelve',
 'thirty',
 'pm',
 'hilton',
 'room',
 'six',
 'hundred',
 'fifteen',
 'ab'],
['zuckerberg',
 'attacks',
 'apple',
 'really',
 'cared',
 'customers',
 'iphones',
 'would',
 'cost',
 'less',
 'aapl',
 'aapl'],
['ok', 'definitely', 'need', 'ipad', 'two', 'sxsw', 'gadgetenvy'],
['google', 'eighty', 'party', 'maggie', 'hair', 'makeup', 'rockin', 'sxsw'],
['struggle', 'rt', 'rt', 'got', 'kidding'],
['think',
 'sxsw',
 'taken',
 'upon',
 'make',
 'clear',
 'gen',
 'one',
 'iphone',
 'going',
 'cut',
 'anymore'],
['rt',
 'guys',
 'ever',
 'plan',
 'attending',
 'sxsw',
 'need',
 'four',
 'things',
 'skinny',
 'jeans',
 'flannel',
 'shirt',
 'beard',
 'ipad',
 'imanoutcast'],
['line', 'outside', 'sxsw', 'apple', 'pop', 'store', 'wasteoftimeatsxsw'],
['rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'possibly',
 'today',
 'sxsw'],
['ipad',
 'menia',
 'sxsw',
 'check',
 'live',
 'feed',
 'photos',
 'apple',
 'store',
 'sxsw',
 'playsxsw'],
['think',
 'fell',
 'bit',
 'love',
 'google',
 'today',
 'thanks',
 'throwing',
 'nerd',
 'party',
 'speakeasy',
 'sxsw'],
['oh',
 'lordy',
 'go',
 'rt',
 'time',
 'apple',
 'store',
 'sxsw',
 'open',
 'pulling',
 'ipad',
 'two',
 'trigger'],
['google',
 'maps',
 'five',
 'two',
 'demo',
 'renders',
 'quickly',
 'three',
 'buildings',
 'landscapes',
 'included',
 'basic',
 'maps',
 'marissagoogle',
 'sxsw'],
['friend',
 'told',
 'talking',
 'smart',
 'bikes',
 'sxsw',
 'check',
 'bit',
 'ly',
 'awa',
 'fifty',
 'google',
 'prototype'],
['yes',
 'rt',
 'apple',
 'store',
 'downtown',
 'austin',
 'open',
 'til',
 'midnight',
 'sxsw'],
['kind',
 'cool',
 'someone',
 'trying',
 'screen',
 'mirroring',
 'ipad',
 'via',
 'camera',
 'hdmi',
 'cable',
 'gents',
 'sxsw'],
['diag',
 'support',
 'suck',
 'lot',
 'says',
 'cannot',
 'connect',
 'server',
 'try',
 'ticket',
 'found',
 'disgusting'],
['sxsw',
 'geek',
 'games',
 'compete',
 'gain',
 'vip',
 'status',
 'win',
 'big',
 'prizes',
 'know',
 'mashable',
 'geek',
 'games',
 'sxsw',
 'cyber',
 'iphone'],
['apple',
 'set',
 'open',
 'popup',
 'shop',
 'core',
 'sxsw',
 'action',
 'downtown',
 'austin',
 'ipad'],
['sxsw', 'apple', 'schools', 'marketing', 'experts', 'sxsw'],
['pretty',
 'sure',
 'panelist',
 'thinks',
 'apple',
 'drowning',
 'success',
 'fucking',
 'insane',
 'sxsw'],
['hey', 'hell', 'hahaha'],
['listening',
 'developer',
 'netflix',
 'app',
 'iphone',
 'talk',
 'mistakes',
 'made',
 'ap',
 'interesting',
 'stuff',
 'sxsw'],
['trend',
 'google',
 'circles',
 'google',
 'circles',
 'new',
 'social',
 'site',
 'works',
 'debut',
 'sxsw',
 'sxswi',
 'deny',
 'ex'],
['thank',
 'rt',
 'sxsw',
 'touchingstories',
 'great',
 'presentation',
 'future',
 'digital',
 'magazines'],
['apple',
 'store',
 'downtown',
 'austin',
 'open',
 'til',
 'midnight',
 'sxsw',
 'ipad',
 'two',
 'left',
 'stock'],
['thanks', 'making', 'life', 'complicated'],
['rt',
 'honor',
 'apple',
 'sxsw',
 'pop',
 'shop',
 'thoughts',
 'landlords',
 'leasing',
 'agents',
 'utilize',
 'pop',
 'shops'],
['rt',
 'able',
 'afford',
 'attend',
 'sxsw',
 'buy',
 'ipad',
 'today',
 'consider',
 'saving',
 'japan',
 'earthquake',
 'relief'],
['sxsw',
 'ladies',
 'stds',
 'ipad',
 'bot',
 'twitter',
 'creator',
 'persistent',
 'guy',
 'chased',
 'last',
 'night',
 'takeonefortheteam',
 'sxsw'],
['ipad',
 'two',
 'turned',
 'giant',
 'camera',
 'looks',
 'plain',
 'stupid',
 'sxsw'],
['browser',
 'prefer',
 'internet',
 'explorer',
 'nine',
 'google',
 'chrome',
 'sway',
 'via',
 'ie',
 'nine',
 'sxsw'],
['surrounded',
 'tats',
 'piercings',
 'live',
 'music',
 'gadgets',
 'galore',
 'yep',
 'hipster',
 'heaven',
 'google',
 'gsdm',
 'welivehere',
 'wepartyhere',
 'sxsw'],
['rt',
 'google',
 'circles',
 'google',
 'latest',
 'social',
 'venture',
 'google',
 'circles',
 'reportedly',
 'launched',
 'sxsw',
 'today'],
['rt',
 'idea',
 'combine',
```

```
  'google',
  'analytics',
  'tools',
  'know',
  'website',
  'program',
  'something',
  'sxsw',
  'bavcid'],
 ['rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch',
  'via'],
 ['eightbit',
  'hits',
  'street',
  'running',
  'html',
  'five',
  'power',
  'sxsw',
  'got',
  'lot',
  'fun',
  'iphone',
  'nes',
  'sxsw',
  'thestreet'],
 ['taking',
  'google',
  'tour',
  'tomorrow',
  'staying',
  'bay',
  'area',
  'tom',
  'night',
  'flying',
  'aus',
  'first',
  'thing',
  'sxsw'],
 ['wifi',
  'android',
  'geeks',
  'nearby',
  'sxsw',
  'please',
  'try',
  'sharing',
  'frostwire',
  'issued',
  'update'],
 ['around',
  'sxsw',
  'need',
  'us',
  'sim',
  'iphone',
  'three',
  'gs',
  'next',
  'ten',
  'want',
  'bring',
  'one',
  'please'],
 ['love',
  'long',
  'time',
  'catherine',
  'lori',
  'girls',
  'found',
  'lost',
  'iphone',
  'sxsw',
  'info',
  'desk',
  'ftw'],
 ['please', 'make', 'charger', 'actually', 'last'],
 ['sxsw', 'exposing', 'iphone', 'horrendous', 'battery', 'life'],
 ['rt',
  'forty',
  'google',
  'maps',
  'usage',
  'mobile',
  'marissa',
  'mayer',
  'sxsw'],
 ['way',
  'love',
  'discuss',
  'apple',
  'breeds',
  'midst',
  'pre',
  'sxsw',
  'madness'],
 ['google',
  'marissa',
  'mayer',
  'presenting',
  'location',
  'nerds',
  'read',
  'swoon',
  'sxsw'],
 ['forty', 'google', 'maps', 'use', 'mobile', 'marissamayer', 'sxsw'],
 ['apple',
  'product',
  'chargers',
  'look',
  'like',
  'rt',
  'rt',
  'got',
  'kidding'],
 ['free', 'sxsw', 'sampler', 'itunes', 'freemusic'],
 ['apple', 'unveils', 'icarradio', 'south', 'southwest', 'apple', 'sxsw'],
 ['rt', 'able', 'forward', 'voicemail', 'thing'],
 ['trying',
  'two',
  'convince',
  'two',
  'watch',
  'launch',
  'google',
  'social',
  'network',
  'sxsw',
  'know',
  'going',
  'comedy'],
 ['rt',
  'next',
  'big',
  'thing',
  'hmmm',
  'rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['rt',
  'rt',
  'rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['apple',
  'opening',
  'temporary',
  'ipad',
  'two',
  'store',
  'handle',
  'sxsw',
  'demand'],
 ['rt',
  'sxsw',
  'quotables',
  'giving',
  'away',
  'ipad',
  'two',
  'today',
  'need',
  'sign',
  'entered',
  'automatically',
  'sxsw'],
 ['almost',
  'time',
  'enter',
  'win',
  'ipad',
  'two',
  'emc',
  'booth',
  'sxsw',
  'exhibit',
  'hall'],
 ['apple', 'hp', 'popups', 'sxsw', 'gee', 'wonder', 'get', 'traffic'],
 ['apple',
  'sets',
  'temporary',
  'store',
  'ipad',
  'two',
  'lil',
  'jealous',
  'sxsw'],
 ['anxious', 'see', 'google', 'store', 'sxsw', 'today'],
 ['thank',
  'bart',
  'retweeting',
  'ipad',
  'two',
  'startup',
  'sxsw',
  'tweets',
  'excited',
  'ipad',
  'two'],
 ['pair',
  'nice',
  'back',
  'back',
  'talks',
  'morning',
  'interface',
  'design',
  'ipad',
  'future',
  'touch',
  'general',
  'sxsw'],
 ['rt',
  'good',
  'news',
  'austin',
  'eats',
  'bbq',
  'iphone',
  'available',
  'itunes',
  'austin',
  'bbq',
  'sxsw',
  'sxswi'],
 ['rt',
  'rt',
  'spilled',
  'beans',
  'next',
  'platform',
  'flipboard',
  'iphone',
  'team',
  'started',
  'working',
  'sxflip',
  'sxsw',
  'sxswi'],
 ['near',
  'zen',
  'guadalupe',
  'three',
  'nineteen',
  'one',
  'pm',
  'trailer',
  'space',
  'night',
  'playing',
  'iphone',
  'maurice',
  'friend',
  'sxsw'],
 ['checking', 'pop', 'apple', 'store', 'sxsw'],
 ['oh', 'oh', 'oh', 'ipad', 'come', 'sxsw', 'badge'],
 ['got',
  'ipad',
  'two',
  'white',
  'sixty',
  'four',
  'gb',
  'wifi',
  'blue',
  'cover',
  'thing',
  'sell',
  'sxsw',
  'apple',
  'store'],
 ['well',
  'thanks',
  'losing',
  'five',
  'thousand',
  'songs',
  'classic',
  'every',
  'photo',
  'itouch',
  'deleted',
  'greatcompany'],
 ['great',
  'festival',
  'app',
  'sxsw',
  'featured',
  'app',
  'store',
  'works',
  'google',
  'maps',
  'plan',
  'schedule',
  'free'],
 ['buy', 'buy', 'rt', 'even', 'begins', 'apple', 'wins', 'sxsw'],
 ['rt',
  'studio',
  'forty',
  'five',
  'zero',
  'ft',
  'one',
  'outlet',
  'four',
  'computers',
  'need',
  'batteries',
  'future'],
 ['handed', 'device', 'fix', 'owner', 'fancy', 'waiting', 'nowounder'],
 ['rt',
  'many',
  'asked',
  'last',
  'night',
  'free',
  'android',
  'phone',
  'sign',
  'urthots',
  'com',
  'visit',
  'urthots',
  'com',
  'promo',
  'sxswi',
  'sxsw'],
 ['tech', 'apple', 'opening', 'pop', 'store', 'austin', 'sxsw', 'technology'],
 ['rt',
  'may',
  'invites',
  'cool',
  'sxsw',
  'sxswi',
  'parties',
  'two',
  'iphone',
  'chargers',
  'pocket',
  'happy',
  'see'],
 ['might',
  'also',
  'appreciate',
  'new',
  'iphone',
  'app',
  'tweetcaster',
  'zip',
  'feature',
  'let',
  'us',
  'hide',
  'keywords',
  'hashtag',
  'incl',
  'course',
  'sxsw'],
 ['would',
  'via',
  'apple',
  'opened',
  'pop',
  'store',
  'austin',
  'nerds',
  'sxsw',
  'get',
  'new',
  'ipads',
  'cnet'],
 ['woah', 'sxsw', 'buzz', 'word', 'wake', 'google', 'work', 'imanaussie'],
 ['check',
  'event',
  'sxsw',
  'via',
  'google',
  'maps',
  'lot',
  'buzz',
  'overthere'],
 ['many',
  'people',
  'w',
  'apple',
  'products',
  'sxsw',
  'think',
  'head',
  'explode',
  'message',
  'brought',
  'via',
  'iphone'],
 ['google', 'another', 'go', 'social', 'google', 'circles', 'sxsw', 'google'],
 ['ipad',
  'calendar',
  'frankeninterface',
  'designed',
  'one',
  'interface',
  'metaphor',
  'uses',
  'another',
  'tapworthy',
  'sxsw'],
 ['removed', 'songs', 'ipods', 'without', 'telling', 'customers'],
 ['rt', 'fix'],
 ['genius',
  'move',
  'apple',
  'open',
  'temp',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'via',
  'ipad',
  'two'],
 ['annoys', 'come', 'galaxy', 'five'],
 ['truly', 'feel', 'apple', 'needs', 'itunes', 'match', 'make', 'worth'],
 ['rt',
  'sxsw',
  'need',
  'best',
  'android',
  'dev',
  'html',
  'five',
  'js',
  'issue',
  'need',
  'solving',
  'quickly',
  'handsome',
  'reward',
  'love',
  'grabs'],
 ['apple',
  'really',
  'need',
  'brand',
  'recognition',
  'prefer',
  'red',
  'delicious',
  'variety',
  'sxsw',
  'popupstores'],
 ['happy',
  'monday',
  'camera',
  'fancy',
  'iphone',
  'six',
  'plus',
  'suddenly',
  'stopped',
  'working',
  'weekend',
  'instead',
  'meme'],
 ['iphone',
  'ipad',
  'feel',
  'unequipped',
  'compared',
  'everyone',
  'else',
  'dang',
  'sxsw'],
 ['rt',
  'rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['arrived',
  'seen',
  'single',
  'person',
  'without',
  'iphone',
  'att',
  'better',
  'ready',
  'sxsw'],
 ['among',
  'things',
  'missing',
  'sxsw',
  'google',
  'aclu',
  'eighty',
  'dance',
  'party'],
 ['sxsw', 'anyone', 'know', 'apple', 'pop', 'store'],
 ['day',
  'four',
  'sxswi',
  'wrap',
  'tracy',
  'shea',
  'rick',
  'bobby',
  'liebling',
  'sxsw',
  'hotsheet'],
 ['google',
  'tries',
  'launch',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'sxsw',
  'three',
  'hundred',
  'ten',
  'thousand',
  'four',
  'hundred',
  'nine',
  'h',
  'two',
  'thousand',
  'eleven'],
 ['oh',
  'apple',
  'ridiculous',
  'even',
  'begins',
  'apple',
  'wins',
  'sxsw',
  'via'],
 ['attending', 'ipad', 'design', 'headaches', 'sxsw'],
 ['haha', 'yeah', 'called', 'google', 'circles', 'learned', 'tonight', 'sxsw'],
 ['need',
  'upgrade',
  'iphone',
  'four',
  'soon',
  'possible',
  'taking',
  'pics',
  'without',
  'flash',
  'blows',
  'three',
  'gs',
  'ehteam',
  'sxsw'],
 ['less', 'half', 'hour', 'tell', 'win', 'ipad', 'two', 'rt', 'sxsw', 'sxswi'],
 ['already',
  'tell',
  'brought',
  'ass',
  'pillow',
  'iphone',
  'backup',
  'charger',
  'sxsw',
  'numbassonfloor'],
 ['rt',
  'met',
  'three',
  'girls',
  'apple',
  'itunes',
  'connect',
  'team',
  'iphone',
  'developer',
  'meetup',
  'got',
  'two',
  'talk',
  'would',
  'change',
  'itc',
  'sxsw'],
 ['rt',
  'yes',
  'hate',
  'fanboys',
  'still',
  'valid',
  'though',
  'waited',
  'ipad',
  'two',
  'instead',
  'enjoying',
  'sxsw'],
 ['every',
  'new',
  'iphone',
  'update',
  'spellcheck',
  'suppress',
  'greatness',
  'stop',
  'trying',
  'tell',
  'type'],
 ['notatsxsw', 'sxsw', 'free', 'download', 'meet', 'nearby', 'peps'],
 ['rt', 'five', 'group', 'messages', 'people'],
 ['countdown', 'sxsw', 'begun', 'pick', 'fried', 'speakers', 'itunes'],
 ['rt',
  'ipad',
  'djs',
  'need',
  'one',
  'three',
  'tuesday',
  'douche',
  'bags',
  'need',
  'apply',
  'sxsw'],
 ['many',
  'ipad',
  'two',
  'think',
  'apple',
  'could',
  'sell',
  'sxsw',
  'attendees',
  'set',
  'pop',
  'store',
  'convention',
  'center',
  'sxsw'],
 ['cool',
  'team',
  'startups',
  'came',
  'via',
  'siliconvalley',
  'bus',
  'hacking',
  'apps',
  'ex',
  'google',
  'au',
  'stage',
  'w',
  'speakermeetup',
  'sxsw',
  'dogpatch',
  'labs'],
 ['party', 'good', 'college', 'party', 'feel', 'sxsw'],
 ['competing', 'circles', 'socialflow', 'board', 'resonant', 'topic', 'sxsw'],
 ['ipad', 'two', 'sxsw', 'pop', 'store', 'apple', 'store', 'sxsw', 'w', 'pic'],
 ['rt',
  'rt',
  'rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['lots',
  'chatter',
  'around',
  'google',
  'new',
  'social',
  'network',
  'circles',
  'sxsw',
  'kek'],
 ['rt',
  'egyptian',
  'content',
  'flood',
  'google',
  'put',
  'two',
  'servers',
  'web',
  'came',
  'back',
  'sxsw',
  'sxswsa'],
 ['rt',
  'via',
  'still',
  'big',
  'line',
  'outside',
  'apple',
  'pop',
  'shop',
  'three',
  'days',
  'ipad',
  'debut',
  'sxsw'],
 ['fully', 'explains', 'airplay', 'trouble', 'fix', 'shit'],
 ['got',
  'google',
  'party',
  'speakeasy',
  'free',
  'drinks',
  'food',
  'coming',
  'sxsw'],
 ['rt', 'sxsw', 'apple', 'schools', 'marketing', 'experts'],
 ['google',
  'view',
  'final',
  'end',
  'rather',
  'tool',
  'pointing',
  'users',
  'sources',
  'make',
  'decisions',
  'marissagoogle',
  'sxsw'],
 ['wifi',
  'working',
  'everything',
  'else',
  'ipad',
  'pissed',
  'two',
  'days',
  'like',
  'get',
  'together',
  'apple'],
 ['sxsw',
  'line',
  'one',
  'hundred',
  'outside',
  'apple',
  'pop',
  'store',
  'sixth',
  'congress'],
 ['rt',
  'anyone',
  'sxsw',
  'want',
  'make',
  'quick',
  'hundred',
  'dollars',
  'new',
  'ipad',
  'two',
  'ad',
  'hoc',
  'apple',
  'store',
  'gets',
  'hundred',
  'plus',
  'cost'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'via',
  'sxsw',
  'curious'],
 ['enchantment',
  'get',
  'trustworthiness',
  'zappos',
  'likeability',
  'virgin',
  'product',
  'apple',
  'sxsw'],
 ['google',
  'image',
  'search',
  'jayden',
  'boy',
  'recognized',
  'man',
  'nikon',
  'camera',
  'commercials',
  'sxsw',
  'sxswnikon',
  'hisxsw'],
 ['good',
  'talk',
  'akqas',
  'ipad',
  'interface',
  'w',
  'callback',
  'design',
  'principles',
  'wish',
  'go',
  'beyond',
  'media',
  'marketing',
  'examples',
  'fb',
  'sxsw'],
 ['wireless',
  'drop',
  'connections',
  'issues',
  'net',
  'interruptus',
  'macbook',
  'pro',
  'upgraded',
  'yosemite',
  'problems',
  'disappeared'],
 ['droid',
  'mac',
  'rt',
  'agnerd',
  'confession',
  'using',
  'laptop',
  'ipad',
  'blackberry',
  'follow',
  'sxsw',
  'afar',
  'see',
  'agchat',
  'rock'],
 ['rt',
  'mindjet',
  'going',
  'sxsw',
  'celebrate',
  'giving',
  'away',
  'ipad',
  'two',
  'find',
  'enter'],
```

```
['stop',
 'killing',
 'trees',
 'rt',
 'new',
 'post',
 'business',
 'cards',
 'dead',
 'send',
 'card',
 'via',
 'hashable',
 'sxsw'],
['download',
 'twenty',
 'free',
 'tracks',
 'sxsw',
 'music',
 'sampler',
 'available',
 'store',
 'today'],
['rt',
 'contactless',
 'iphone',
 'payment',
 'system',
 'trialled',
 'visa',
 'anz',
 'bank',
 'due',
 'apple',
 'boycotting',
 'existing',
 'nfc',
 'sxsw'],
['plz',
 'kill',
 'verizon',
 'soooo',
 'weird',
 'apps',
 'passcodes',
 'synchronized',
 'locations',
 'everything'],
['rt',
 'co',
 'founder',
 'google',
 'teacher',
 'academy',
 'bringing',
 'hs',
 'students',
 'austin',
 'show',
 'use',
 'tech',
 'sxsw',
 'education'],
['rt',
 'studio',
 'forty',
 'five',
 'zero',
 'ft',
 'one',
 'outlet',
 'four',
 'computers',
 'need',
 'batteries',
 'future'],
['ipad', 'austin', 'trending', 'today', 'fun', 'sxsw', 'nerdy', 'nerds'],
['apple',
 'google',
 'intel',
 'others',
 'get',
 'going',
 'gold',
 'go',
 'game',
 'thegogame',
 'sxsw'],
['contact',
 'sync',
 'yosemite',
 'ios',
 'eight',
 'seriously',
 'screwed',
 'used',
 'much',
 'stable',
 'past',
 'icloud',
 'isync'],
['rt', 'ipad', 'two', 'takes', 'sxsw'],
['need',
 'go',
 'sxsw',
 'seven',
 'mo',
 'old',
 'sitter',
 'know',
 'score',
 'apple',
 'martin',
 'like',
 'babyheadphones'],
['annoying', 'moment', 'realise', 'iphone', 'six', 'bend', 'one', 'side'],
['please',
 'stop',
 'notifying',
 'upgrade',
 'icloud',
 'storage',
 'use',
 'icloud',
 'enough',
 'upgrade',
 'would',
 'pay',
 'things'],
['rt',
 'badger',
 'angel',
 'news',
 'sxsw',
 'nice',
 'one',
 'also',
 'giving',
 'away',
 'free',
 'ipad',
 'two',
 'contest'],
['rt',
 'google',
 'tweet',
 'new',
 'think',
 'speak',
 'mark',
 'belinsky',
 'nine',
 'hundred',
 'eleven',
 'tweets',
 'panel',
 'sxsw'],
['bloombergtv',
 'former',
 'apple',
 'exec',
 'sentence',
 'one',
 'year',
 'prison',
 'fraud',
 'aapl'],
['rt', 'unloading', 'ipads', 'sxsw', 'apple', 'ipad', 'two'],
['already', 'line', 'ipad', 'two', 'arrived', 'sxsw'],
['win', 'free', 'ipad', 'two', 'webdoc', 'com', 'sxsw', 'rt'],
['check',
 'lightbox',
 'com',
 'team',
 'android',
 'choice',
 'awards',
 'finalists',
 'announced',
 'sxsw',
 'team',
 'rock'],
['google',
 'sketch',
 'artists',
 'live',
 'google',
 'blogger',
 'party',
 'six',
 'lounge',
 'thought',
 'live',
 'blogging',
 'first',
 'sxsw'],
['festivalexplorer',
 'iphone',
 'app',
 'finally',
 'solves',
 'sxsw',
 'music',
 'musica',
 'musiek',
 'musique',
 'musik',
 'app',
 'sxsw'],
['tired',
 'waiting',
 'line',
 'stores',
 'best',
 'buy',
 'austin',
 'announces',
 'ipad',
 'two',
 'sale',
 'today',
 'sxswinfo',
 'sxsw'],
['look',
 'rt',
 'new',
 'ubersocial',
 'iphone',
 'app',
 'store',
 'includes',
 'uberguide',
 'sxsw'],
['il',
 'ceo',
 'di',
 'flipboard',
 'annuncia',
 'la',
 'versione',
 'iphone',
 'next',
 'platform',
 'flipboard',
 'iphone',
 'team',
 'started',
 'working',
 'sxsw'],
['worry',
 'guys',
 'found',
 'iphone',
 'charger',
 'deal',
 'hipsters',
 'beards',
 'right',
 'sxsw'],
['barry',
 'diller',
 'says',
 'silly',
 'write',
 'content',
 'one',
 'form',
 'factor',
 'apple',
 'like',
 'get',
 'money',
 'sxsw'],
['nice',
 'move',
 'apple',
 'set',
 'open',
 'popup',
 'shop',
 'core',
 'sxsw',
 'action'],
['rt',
 'stumbling',
 'around',
 'lost',
 'sxsw',
 'stay',
 'contact',
 'group',
 'iphone',
 'application'],
['ipad',
 'therefore',
 'line',
 'like',
 'apple',
 'store',
 'near',
 'sxsw',
 'austin',
 'send',
 'pics'],
['smart',
 'apple',
 'opens',
 'pop',
 'store',
 'austin',
 'people',
 'sxsw',
 'get',
 'new',
 'ipads',
 'bit',
 'ly',
 'forty',
 'one',
 'h',
 'fifty',
 'three',
 'via'],
['shoot',
 'ipad',
 'display',
 'search',
 'results',
 'go',
 'questions',
 'later',
 'osmpw',
 'sxsw'],
['encounter',
 'w',
 'charming',
 'intense',
 'thethankyoueconomy',
 'w',
 'bright',
 'localmind',
 'suffer',
 'fun',
 'party',
 'sxsw'],
['ipad', 'two', 'hands', 'exquisite', 'sxsw'],
['chris',
 'poole',
 'four',
 'chan',
 'recommends',
 'google',
 'refrigerator',
 'magnet',
 'game',
 'cute',
 'shared',
 'experience',
 'game',
 'sxswmoot',
 'sxsw',
 'sxswi'],
['ok',
 'interested',
 'rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'possibly',
 'today',
 'sxsw'],
['computers',
 'slow',
 'right',
 'making',
 'want',
 'shoot',
 'someone',
 'god',
 'dam',
 'mac',
 'hav',
 'two',
 'deal'],
['sxsw', 'goers', 'wait', 'apple', 'ipad', 'two', 'austin'],
['techcrunch',
 'apple',
 'opening',
 'pop',
 'store',
 'austin',
 'sxsw',
 'store',
 'sxsw',
 'apple'],
['google', 'get', 'social', 'texas', 'sxsw', 'google'],
['sxsw', 'thanks', 'signing', 'ipad'],
['really', 'great', 'charger', 'works', 'well'],
['developers',
 'learn',
 'mobile',
 'accessibility',
 'sxsw',
 'android',
 'three',
 'zero',
 'include',
 'browser',
 'access',
 'eleven',
 'two',
 'go'],
['rt',
 'ipad',
 'two',
 'stacked',
 'like',
 'pizza',
 'boxes',
 'sxsw',
 'apple',
 'store'],
['sxsw',
 'tradeshow',
 'floor',
 'engage',
 'w',
 'multi',
 'touch',
 'interactive',
 'wall',
 'take',
 'part',
 'augmented',
 'reality',
 'three',
 'enter',
 'win',
 'ipad'],
['rumor',
 'rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'possibly',
 'today',
 'sxsw'],
['rt',
 'studio',
 'forty',
 'five',
 'zero',
 'ft',
 'one',
 'outlet',
 'four',
 'computers',
 'need',
 'batteries',
 'future'],
['rt',
 'transparency',
 'choice',
 'control',
 'define',
 'google',
 'products',
 'mayer',
 'thereby',
 'defining',
 'google',
 'brand',
 'values',
 'sxsw'],
['austin', 'today', 'please', 'join', 'talking', 'ipad', 'two', 'sxsw'],
['gsd',
 'google',
 'industry',
 'party',
 'tonight',
 'see',
 'sxsw',
 'austin',
 'welivehere',
 'gsdm'],
['soooo',
 'think',
 'apple',
 'mobile',
 'store',
 'ipad',
 'sales',
 'sxsw',
 'friday'],
['chimpit',
 'party',
 'plutopia',
 'google',
 'maybe',
 'movie',
 'sxsw',
 'starts',
 'today'],
['ideally',
 'google',
 'logos',
 'bring',
 'people',
 'together',
 'socially',
 'creative',
 'lead',
 'google',
 'doodle',
 'team',
 'gsdm',
 'googledoodle',
 'sxsw'],
['rt',
 'kids',
 'grow',
 'thinking',
 'new',
 'york',
 'times',
 'google',
 'separate',
 'industries',
 'bvj',
 'sxsw'],
['thanks',
 'making',
 'great',
 'products',
 'great',
 'making',
 'sxsw',
 'party',
 'podcasts'],
['long', 'really', 'take', 'phone', 'ship', 'smh'],
['rt', 'first', 'shots', 'w', 'ipad', 'two', 'sxsw'],
['web', 'pages', 'appear', 'google', 'qagb', 'sxsw'],
['navigate',
 'cabbie',
 'google',
 'maps',
 'natives',
 'zero',
 'geeks',
 'one',
 'sxsw'],
['new',
 'social',
 'network',
 'may',
 'debut',
 'sxsw',
 'google',
 'circles',
 'eatdrinktweet',
 'done',
 'yet'],
['happy',
 'discovr',
 'named',
 'one',
 'top',
 'ten',
 'must',
 'apps',
 'ipad',
 'two',
 'fight',
 'way',
 'thru',
 'queue',
 'sxsw'],
['z',
 'twenty',
 'seven',
 'law',
 'codes',
 'valid',
 'four',
 'zero',
 'seven',
 'fifty',
 'nine',
 'fifty',
 'nine',
 'p',
 'three',
 'thirteen',
 'eleven',
 'infektd',
 'sxsw',
 'zlf'],
['apple',
 'tv',
 'sales',
 'topped',
 'chromecast',
 'aapl',
 'pushed',
 'apple',
 'inc',
 'aapl',
 'never',
 'made',
 'much',
 'fuss',
 'ab'],
['soon', 'fact', 'sxsw', 'play', 'ipad', 'booth', 'convention'],
['hootsuite',
 'mobile',
 'sxsw',
 'updates',
 'iphone',
 'blackberry',
 'android',
 'via'],
['rt',
 'livetapp',
 'raffling',
 'ipad',
 'two',
 'sxsw',
 'check',
 'tweet',
 'sxsw',
 'show',
 'entered',
 'win',
 'music',
 'rewards'],
['rt',
 'apple',
 'puts',
 'popup',
 'store',
 'sxsw',
 'hawk',
 'ipad',
 'two',
 'think',
 'sell',
 'one',
 'two'],
['rt',
 'nine',
 'sxsw',
 'right',
 'brain',
 'mwrc',
 'eleven',
 'left',
 'brain',
 'rt',
 'sxsw',
 'nine',
 'ten',
 'attendees',
 'mac',
 'ipad'],
['sxsw',
 'itinerary',
 'events',
 'free',
 'require',
 'band',
 'badge',
 'enjoy',
 'fest'],
['oh',
 'delete',
 'unwanted',
 'photos',
 'eight',
 'times',
 'enough',
 'want',
 'recently',
 'deleted',
 'folder'],
['ipad',
 'two',
 'live',
 'unboxing',
 'front',
 'sxsw',
 'apple',
 'store',
 'video'],
['trying',
 'steve',
 'wozniak',
 'drink',
 'free',
 'thanks',
 'google',
 'h',
 'four',
 'ckers',
 'sxsw',
 'speakeasy'],
['iphone', 'chargers', 'suck', 'ass', 'disappointed'],
['interesting',
 'google',
 'mobile',
 'stats',
 'sxsw',
 'forty',
 'google',
 'maps',
 'users',
 'one',
 'hundred',
 'fifty',
 'million',
 'come',
 'mobile'],
['rt',
 'uses',
 'google',
 'tv',
 'room',
 'nobody',
 'raises',
 'hand',
 'packed',
 'room',
 'socialviewing',
 'session',
 'sxsw'],
['wow', 'google', 'maps', 'mobile', 'v', 'five', 'demo', 'sxsw', 'nice'],
['apple',
 'opening',
 'temporary',
 'pop',
 'store',
 'austin',
 'sxsw',
 'ipad',
 'two',
 'launch'],
['rt',
 'android',
 'apps',
 'survive',
 'sxsw',
 'two',
 'thousand',
 'eleven',
 'sxsw'],
['ser',
 'cierto',
 'rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'possibly',
 'today',
 'rww',
 'f',
 'six',
 'bcet',
 'sxsw'],
['rt',
 'google',
 'looking',
 'social',
 'signals',
 'search',
 'results',
 'qagb',
 'sxsw'],
['kid',
 'ducked',
 'exposing',
 'four',
 'chan',
 'four',
 'eva',
 'tattoo',
 'small',
 'back',
 'ipad',
 'flew',
 'right',
 'sxsw'],
['sxsw',
 'lonelyplanet',
 'austin',
 'guide',
 'iphone',
 'free',
 'limited',
 'time',
 'lp',
 'travel'],
['overheard',
 'mdw',
 'second',
 'halfway',
 'iphone',
 'battery',
 'already',
 'even',
 'boarded',
 'plane',
 'sxsw',
 'amateurhour'],
['came',
 'left',
 'sxsw',
 'iphone',
 'playing',
 'song',
 'chosen',
 'random',
 'skream',
 'listening',
 'records',
 'wall',
 'appropriate'],
['forget', 'samplers', 'download', 'unofficial', 'sxsw', 'torrent'],
['z',
 'seventeen',
 'protect',
 'innocent',
 'en',
 'six',
 'p',
 'two',
 'e',
 'codes',
 'valid',
 'eight',
 'zero',
 'eleven',
 'fifty',
 'nine',
 'fifty',
 'nine',
 'p',
 'three',
 'twelve',
 'eleven',
 'infektd',
 'sxsw',
 'zlf'],
['named',
 'desired',
 'brand',
 'blackfriday',
 'cybermonday',
 'beating',
 'tech',
 'rival',
 'via'],
['oooh',
 'want',
 'rt',
 'recap',
 'recycled',
 'skateboards',
 'iphone',
 'cases',
 'sxsw'],
['lots', 'free', 'music', 'sxsw', 'bands'],
['sxsw',
 'touchingstories',
 'great',
 'presentation',
 'future',
 'digital',
 'magazines'],
['reading',
 'coverage',
 'apple',
 'pop',
 'shop',
 'sxsw',
 'takeaway',
```

```
  'one',
  'figure',
  'agree',
  'punctuate',
  'pop',
  'shop'],
 ['pop', 'apple', 'store', 'packed', 'sxsw'],
 ['one',
  'good',
  'thing',
  'waiting',
  'store',
  'appointment',
  'cleared',
  'backlog',
  'emails',
  'inbox'],
 ['apple',
  'offers',
  'original',
  'ipad',
  'donation',
  'program',
  'entry',
  'friends',
  'house',
  'sxsw'],
 ['following',
  'sxsw',
  'tweets',
  'google',
  'realtime',
  'four',
  'platforms',
  'tweet',
  'deck',
  'listening',
  'panel',
  'realizing',
  'spoken',
  'one',
  'today'],
 ['cannot',
  'wait',
  'give',
  'ipad',
  'someone',
  'sxsw',
  'want',
  'head',
  'www',
  'pep',
  'jobs',
  'upc',
  'enter',
  'must',
  'present',
  'win'],
 ['surprise',
  'apple',
  'opened',
  'pop',
  'store',
  'austin',
  'nerds',
  'town',
  'sxsw',
  'get',
  'new',
  'ipads',
  'cnet'],
 ['rt',
  'studio',
  'forty',
  'five',
  'zero',
  'ft',
  'one',
  'outlet',
  'four',
  'computers',
  'need',
  'batteries',
  'future'],
 ['sxsw',
  'folks',
  'lonely',
  'planet',
  'iphone',
  'guide',
  'austin',
  'free',
  'week'],
 ['rt',
  'imagine',
  'every',
  'company',
  'twenty',
  'concept',
  'like',
  'google',
  'bavcid',
  'sxsw'],
 ['wondering',
  'street',
  'closures',
  'sxsw',
  'made',
  'google',
  'map',
  'show',
  'sxsw',
  'austin'],
 ['see',
  'sxsw',
  'two',
  'thousand',
  'eleven',
  'two',
  'talks',
  'android',
  'chrome',
  'texttospeech',
  'another',
  'cellbots',
  'sxsw'],
 ['rt', 'spotted', 'sxsw', 'man', 'need', 'ipad', 'two', 'sxswi'],
 ['apple',
  'intel',
  'genentech',
  'atari',
  'cisco',
  'something',
  'ventured',
  'traces',
  'risk',
  'takers',
  'wrote',
  'checks',
  'sxsw'],
 ['check',
  'new',
  'chatting',
  'texting',
  'startups',
  'coming',
  'sxsw',
  'iphone',
  'chat',
  'client'],
 ['everyone',
  'buying',
  'ipad',
  'two',
  'feel',
  'like',
  'dinosaur',
  'version',
  'blackberry',
  'pc',
  'sxsw',
  'like',
  'apple',
  'convention',
  'sxsw'],
 ['meant',
  'itunes',
  'work',
  'ie',
  'run',
  'apple',
  'software',
  'even',
  'would',
  'run',
  'ubuntu',
  'desktop',
  'sxsw',
  'dl'],
 ['hoping',
  'blackberry',
  'sprint',
  'popup',
  'store',
  'opens',
  'get',
  'xtra',
  'battery',
  'yes',
  'still',
  'sprint',
  'blackberry',
  'sxsw',
  'apple'],
 ['got',
  'vmware',
  'talent',
  'community',
  'ipad',
  'app',
  'rockin',
  'signing',
  'talented',
  'professionals',
  'tonight',
  'find',
  'sxsw'],
 ['mayer',
  'showcasing',
  'google',
  'places',
  'hotpot',
  'restaurants',
  'rating',
  'tool',
  'hello',
  'mobile',
  'advertising',
  'check',
  'ins',
  'push',
  'sxsw'],
 ['woohoo',
  'rt',
  'go',
  'game',
  'launches',
  'iphone',
  'scavenger',
  'hunts',
  'via',
  'see',
  'sxsw'],
 ['apple',
  'opening',
  'pop',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['google',
  'marissa',
  'mayer',
  'location',
  'based',
  'fast',
  'fun',
  'future',
  'sxsw',
  'sxswi'],
 ['new',
  'www',
  'divasanddorks',
  'com',
  'apple',
  'ipad',
  'two',
  'invades',
  'sxsw'],
 ['rt',
  'apple',
  'pop',
  'shop',
  'lavaca',
  'six',
  'th',
  'sxsw',
  'yes',
  'line',
  'wraps',
  'around',
  'block',
  'apple',
  'store',
  'sxsw'],
 ['white',
  'ipad',
  'two',
  'sixty',
  'four',
  'gig',
  'wifi',
  'available',
  'austin',
  'sxsw',
  'apple',
  'popup',
  'store',
  'right',
  'wait'],
 ['rt',
  'google',
  'looks',
  'future',
  'mobile',
  'location',
  'based',
  'devices',
  'sxsw'],
 ['apple',
  'inc',
  'catching',
  'iphone',
  'six',
  'supply',
  'still',
  'lagging',
  'demand',
  'aapl'],
 ['platform',
  'concertgoers',
  'launches',
  'android',
  'app',
  'time',
  'sxsw',
  'mashable',
  'sxsw'],
 ['lol',
  'rt',
  'worry',
  'guys',
  'found',
  'iphone',
  'charger',
  'deal',
  'hipsters',
  'beards',
  'right',
  'sxsw'],
 ['rt',
  'lolshow',
  'podcast',
  'w',
  'android',
  'security',
  'sxsw',
  'dickbar',
  'ie',
  'six',
  'ipad',
  'two'],
 ['run',
  'two',
  'hundred',
  'seventy',
  'iphone',
  'battery',
  'eight',
  'hours',
  'sxsw'],
 ['watch',
  'ears',
  'rt',
  'austin',
  'convention',
  'center',
  'today',
  'w',
  'fam',
  'showing',
  'new',
  'iphone',
  'game',
  'sxsw'],
 ['yes',
  'gowalla',
  'wins',
  'best',
  'andoid',
  'app',
  'team',
  'android',
  'choice',
  'awards',
  'thanks',
  'sxsw'],
 ['finished',
  'mad',
  'dash',
  'complete',
  'ipad',
  'formatted',
  'web',
  'app',
  'client',
  'showing',
  'sxsw',
  'fun'],
 ['macbook',
  'pro',
  'annoying',
  'asus',
  'windows',
  'eight',
  'computer',
  'freezing',
  'laggy',
  'etc',
  'much',
  'excellence'],
 ['watching',
  'three',
  'rendering',
  'google',
  'team',
  'put',
  'together',
  'awe',
  'inspiring',
  'like',
  'jetsons',
  'marissagoogle',
  'sxsw'],
 ['appears',
  'apple',
  'opening',
  'pop',
  'store',
  'austin',
  'sxsw',
  'employees',
  'trying',
  'hide',
  'beechwood',
  'tables',
  'gave',
  'away'],
 ['rt',
  'new',
  'ubersocial',
  'iphone',
  'app',
  'store',
  'includes',
  'uberguide',
  'sxsw'],
 ['cannot',
  'wait',
  'see',
  'internet',
  'implode',
  'austin',
  'friday',
  'everyone',
  'stops',
  'normal',
  'activity',
  'order',
  'ipad',
  'two',
  'sxsw'],
 ['die',
  'hard',
  'customer',
  'must',
  'say',
  'truly',
  'displeased',
  'customer',
  'service',
  'given',
  'today',
  'badservice',
  'apple'],
 ['google',
  'announce',
  'competitor',
  'fb',
  'exciting',
  'launches',
  'abound',
  'sxsw',
  'mobile',
  'steals',
  'show'],
 ['pop',
  'apple',
  'store',
  'austin',
  'two',
  'weeks',
  'sxsw',
  'time',
  'ipad',
  'two',
  'ships',
  'great',
  'timing'],
 ['awesome',
  'hear',
  'marissa',
  'mayer',
  'acknowledge',
  'google',
  'maps',
  'needs',
  'increase',
  'support',
  'product',
  'b',
  'c',
  'incorrect',
  'routes',
  'sxsw'],
 ['spearheading',
  'japan',
  'disaster',
  'relief',
  'sxsw',
  'via',
  'twitter',
  'iphone',
  'socialgood',
  'philanthropy'],
 ['case',
  'cannot',
  'get',
  'google',
  'check',
  'star',
  'wars',
  'uncut',
  'well',
  'worth',
  'time',
  'sxsw'],
 ['get',
  'rich',
  'quick',
  'criminal',
  'capitalist',
  'steal',
  'client',
  'products',
  'apple',
  'technology'],
 ['interview',
  'mike',
  'mccue',
  'co',
  'founder',
  'flipboard',
  'ipad',
  'users',
  'tune',
  'smc',
  'sxsw'],
 ['looks',
  'interesting',
  'good',
  'luck',
  'sxsw',
  'localmind',
  'available',
  'iphone'],
 ['ipad', 'two', 'sale', 'cc', 'sxsw', 'sxswi', 'theinternet'],
 ['mayer',
  'also',
  'admits',
  'google',
  'needs',
  'step',
  'customer',
  'support',
  'google',
  'maps',
  'sxsw'],
 ['rt', 'hear', 'apple', 'opening', 'temporary', 'store', 'sxsw', 'via'],
 ['ipad', 'design', 'headaches', 'josh', 'clark', 'tapworthy', 'sxsw'],
 ['jealous',
  'see',
  'people',
  'ipad',
  'two',
  'take',
  'photos',
  'iwantacameraonmyipad',
  'sxsw'],
 ['spotlighting',
  'new',
  'mobile',
  'apps',
  'sxsw',
  'peak',
  'ipad',
  'jobsearch',
  'app',
  'video'],
 ['consumerist',
  'worst',
  'company',
  'america',
  'two',
  'thousand',
  'eleven',
  'tournament',
  'bracket',
  'apple',
  'pitted',
  'microsoft',
  'first',
  'round',
  'sxsw'],
 ['hey', 'sxsw', 'ers', 'coming', 'long', 'apple', 'pop', 'store', 'line'],
 ['watch', 'scores', 'search', 'showdown', 'sxsw'],
 ['rt',
  'hey',
  'sxsw',
  'movers',
  'shakers',
  'publishing',
  'poke',
  'box',
  'ebook',
  'next',
  'week',
  'get',
  'involved'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'updated',
  'sxsw'],
 ['rt',
  'going',
  'sxsw',
  'new',
  'iphone',
  'guide',
  'austin',
  'free',
  'march',
  'nine',
  'fifteen',
  'hard',
  'beat',
  'free',
  'lp'],
 ['rt',
  'walking',
  'trade',
  'show',
  'sxsw',
  'basically',
  'swapping',
  'ten',
  'business',
  'cards',
  'chances',
  'win',
  'ten',
  'different',
  'ipad',
  'two'],
 ['guy',
  'front',
  'apple',
  'store',
  'austin',
  'reading',
  'bible',
  'wondering',
  'someone',
  'would',
  'give',
  'ipad',
  'bible',
  'app',
  'sxsw'],
 ['rt',
  'dude',
  'outkast',
  'concert',
  'tweeting',
  'ipad',
  'rt',
  'old',
  'school',
  'players',
  'new',
  'school',
  'fools',
  'sxsw'],
 ['loaded', 'groupme', 'app', 'iphone', 'load', 'sxsw', 'brethren'],
 ['lonely',
  'planet',
  'austin',
  'guide',
  'iphone',
  'free',
  'download',
  'limited',
  'period',
  'sxsw'],
 ['rt', 'fuck', 'recently', 'deleted', 'photo', 'album'],
 ['rt',
  'rt',
  'heard',
  'apple',
  'pop',
  'store',
  'downtown',
  'austin',
  'pics',
  'already',
  'gowalla',
  'sxsw',
  'pop',
  'pop'],
 ['apple', 'temporarily', 'opening', 'store', 'austin', 'sxsw'],
 ['rt', 'geek', 'charlie', 'sheen', 'goddesses', 'google', 'sxsw'],
 ['google', 'circles', 'new', 'social', 'network', 'sxsw'],
 ['google', 'connect', 'digital', 'physical', 'worlds', 'mobile', 'sxsw'],
 ['guess',
  'rumors',
  'wrong',
  'launching',
  'products',
  'sxsw',
  'plenty',
  'else'],
 ['rt',
  'ireport',
  'austin',
  'apple',
  'store',
  'via',
  'highlight',
  'co',
  'founder',
  'josh',
  'williams',
  'sxsw'],
 ['know',
  'made',
  'sxsw',
  'see',
  'bunch',
  'grown',
  'men',
  'hooting',
  'getting',
  'ipad',
  'two'],
 ['sam',
  'unlocked',
  'tightasstraveler',
  'achievement',
  'sxsw',
  'using',
  'google',
  'maps',
  'transit',
  'instructions'],
 ['google',
  'eighty',
  'party',
  'maggie',
  'maes',
  'sxsw',
  'got',
  'free',
  'glow',
  'dark',
  'shades'],
 ['partying',
  'like',
  'one',
  'thousand',
  'nine',
  'hundred',
  'eighty',
  'six',
  'last',
  'time',
  'privacy',
  'law',
  'updated',
  'google',
  'aclu',
  'sxsw',
  'maggie',
  'mae',
  'pic'],
 ['mike',
  'tyson',
  'signing',
  'autographs',
  'promote',
  'iphone',
  'boxing',
  'game',
  'oh',
  'mighty',
  'fallen',
  'sxswi',
  'sxsw'],
 ['rt',
  'rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['homeless',
  'guy',
  'outside',
  'pop',
  'sxsw',
  'apple',
  'store',
  'holding',
  'sign',
  'saving',
  'ipad',
  'two',
  'ask',
  'photo'],
 ['rt',
  'google',
  'launched',
  'checkins',
  'month',
  'ago',
  'check',
  'ins',
  'ok',
  'check',
  'outs',
  'future',
  'sxsw',
  'bizzy'],
 ['wants', 'stop', 'taking', 'vertical', 'photos', 'via'],
 ['rt', 'apple', 'popup', 'store', 'sxsw'],
 ['per',
  'rumor',
  'google',
  'may',
  'preview',
  'big',
  'social',
  'strategy',
  'eighty',
  'themed',
  'costume',
  'party',
  'sxsw',
  'yep'],
 ['imagine',
  'every',
  'company',
  'twenty',
  'concept',
  'like',
  'google',
  'bavcid',
  'sxsw'],
 ['rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'google',
  'circles',
  'sxsw'],
 ['happy',
  'monday',
  'camera',
  'fancy',
  'iphone',
  'six',
  'plus',
  'suddenly',
  'stopped',
  'working',
  'weekend',
  'instead',
  'meme'],
 ['apple',
  'opens',
```

```
  'temp',
  'store',
  'sxsw',
  'events',
  'start',
  'day',
  'good',
  'work',
  'apple'],
 ['unseats', 'classrooms', 'chromebooks', 'beat', 'ipads'],
 ['iphone',
  'six',
  'plus',
  'impossible',
  'hold',
  'without',
  'cover',
  'slides',
  'hand',
  'apple',
  'iphone'],
 ['strange',
  'little',
  'japan',
  'news',
  'penetrates',
  'sxsw',
  'bubble',
  'bar',
  'tvs',
  'cnn',
  'suggest',
  'anything',
  'important',
  'ipad',
  'two',
  'going',
  'fb'],
 ['location',
  'pixieengine',
  'rt',
  'google',
  'says',
  'future',
  'location',
  'location',
  'location',
  'sxsw',
  'cnn'],
 ['waiting',
  'eagerly',
  'google',
  'launch',
  'secret',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'today',
  'sxsw',
  'new',
  'updates'],
 ['heck', 'phone', 'screen', 'looks', 'like', 'lost', 'battle', 'windstorm'],
 ['fact',
  'itunes',
  'updates',
  'makes',
  'anal',
  'reset',
  'play',
  'counts',
  'sometimes',
  'mostttttt'],
 ['echofon',
  'iphone',
  'mac',
  'mute',
  'functions',
  'block',
  'sxsw',
  'sxswi',
  'wait'],
 ['agree',
  'apple',
  'customer',
  'service',
  'based',
  'condescending',
  'employees',
  'treating'],
 ['rt',
  'yes',
  'gowalla',
  'wins',
  'best',
  'andoid',
  'app',
  'team',
  'android',
  'choice',
  'awards',
  'thanks',
  'sxsw'],
 ['get',
  'amy',
  'ice',
  'cream',
  'get',
  'comfortable',
  'apple',
  'ipad',
  'two',
  'sxsw',
  'fb'],
 ['rt',
  'rt',
  'apple',
  'classiest',
  'fascist',
  'company',
  'america',
  'says',
  'sxsw'],
 ['rt',
  'miss',
  'google',
  'vp',
  'search',
  'marissa',
  'mayer',
  'last',
  'week',
  'listen',
  'interview',
  'sxsw'],
 ['love',
  'macbook',
  'ipad',
  'iphone',
  'sxsw',
  'year',
  'one',
  'runs',
  'juice',
  'jump',
  'next'],
 ['going',
  'sxsw',
  'year',
  'geeky',
  'enough',
  'instead',
  'challenging',
  'boggle',
  'ipad'],
 ['heard', 'ipads', 'sold', 'except', 'apple', 'pop', 'store', 'sxsw', 'true'],
 ['rt',
  'new',
  'ipad',
  'apps',
  'speech',
  'therapy',
  'communication',
  'showcased',
  'sxsw'],
 ['applauds',
  'holler',
  'gram',
  'fun',
  'ipad',
  'app',
  'sxsw',
  'fun',
  'anyone',
  'play'],
 ['way',
  'looking',
  'spanish',
  'speaking',
  'trend',
  'scout',
  'based',
  'austin',
  'sxsw'],
 ['unique',
  'sxsw',
  'one',
  'w',
  'iphone',
  'three',
  'gs',
  'others',
  'followers',
  'iphone',
  'four',
  'winning'],
 ['hmm',
  'nine',
  'sxsw',
  'right',
  'brain',
  'mwrc',
  'eleven',
  'left',
  'brain',
  'rt',
  'sxsw',
  'nine',
  'ten',
  'attendees',
  'mac',
  'ipad'],
 ['one',
  'st',
  'twenty',
  'seven',
  'lcd',
  'cinema',
  'display',
  'facetime',
  'ipad',
  'two',
  'facetime',
  'sxsw',
  'bar',
  'living',
  'room',
  'lol'],
 ['rt',
  'agnerd',
  'confession',
  'using',
  'laptop',
  'ipad',
  'blackberry',
  'follow',
  'sxsw',
  'afar',
  'see',
  'agchat',
  'rock',
  'agnerd'],
 ['rt',
  'cannot',
  'wait',
  'anymore',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'via',
  'google',
  'circles',
  'sxsw'],
 ['full',
  'house',
  'apparently',
  'people',
  'care',
  'google',
  'rankings',
  'synthetic',
  'life',
  'tsk',
  'tsk',
  'people',
  'qagb',
  'sxsw'],
 ['awesome',
  'rt',
  'knitted',
  'staircase',
  'attendance',
  'sxsw',
  'party',
  'tomo',
  'seven',
  'pm',
  'hosted'],
 ['getting',
  'iphone',
  'juiced',
  'sonos',
  'team',
  'sxsw',
  'next',
  'apple',
  'store',
  'austin',
  'got',
  'love'],
 ['rt',
  'google',
  'cutts',
  'says',
  'reputation',
  'topicality',
  'two',
  'keys',
  'matter',
  'site',
  'rankings',
  'qagb',
  'sxsw'],
 ['best',
  'thing',
  'heard',
  'weekend',
  'sxsw',
  'gave',
  'ipad',
  'two',
  'money',
  'japan',
  'relief',
  'need',
  'ipad',
  'two'],
 ['rt',
  'studio',
  'forty',
  'five',
  'zero',
  'ft',
  'one',
  'outlet',
  'four',
  'computers',
  'need',
  'batteries',
  'future'],
 ['rt',
  'protesters',
  'stage',
  'diein',
  'protests',
  'store',
  'nyc',
  'anger',
  'misplaced',
  'retweet',
  'agree'],
 ['following',
  'bing',
  'google',
  'seo',
  'session',
  'qagb',
  'sxsw',
  'buddy',
  'seo'],
 ['line',
  'people',
  'around',
  'block',
  'sxsw',
  'party',
  'apple',
  'store',
  'insane'],
 ['rt',
  'gary',
  'starting',
  'new',
  'show',
  'daily',
  'grape',
  'iphone',
  'thankyouecon',
  'sxsw'],
 ['users',
  'drive',
  'twelve',
  'b',
  'miles',
  'year',
  'google',
  'maps',
  'navigation',
  'jr',
  'sxsw'],
 ['forget',
  'disneyland',
  'apple',
  'pop',
  'store',
  'austin',
  'happiest',
  'place',
  'earth',
  'sxsw'],
 ['rt',
  'able',
  'afford',
  'attend',
  'sxsw',
  'buy',
  'ipad',
  'today',
  'consider',
  'saving',
  'japan',
  'earthquake',
  'relief',
  'sayin'],
 ['rt',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw',
  'smm',
  'really',
  'google'],
 ['rt',
  'hi',
  'accidentally',
  'took',
  'ipad',
  'techi',
  'set',
  'pepsicostage',
  'would',
  'please',
  'return',
  'sxsw'],
 ['technology',
  'apple',
  'opening',
  'pop',
  'store',
  'austin',
  'sxsw',
  'apple',
  'setting',
  'pop',
  'store',
  'west',
  'sixth',
  'tech'],
 ['iphone',
  'users',
  'really',
  'clueless',
  'android',
  'os',
  'ui',
  'presentation',
  'seem',
  'basic',
  'everyone',
  'else',
  'sxsw'],
 ['ok', 'guess', 'app', 'developers', 'takethis', 'weeek', 'huh'],
 ['making',
  'sure',
  'packed',
  'everything',
  'need',
  'sxsw',
  'iphone',
  'ipad',
  'chargers',
  'business',
  'cards',
  'pants',
  'missing',
  'anything'],
 ['clearly',
  'back',
  'twitter',
  'tiff',
  'think',
  'iphone',
  'sxsw',
  'bigger',
  'sundance',
  'even',
  'filmfestepic'],
 ['mike', 'tyson', 'launched', 'iphone', 'game', 'sxsw', 'tech', 'news'],
 ['rt',
  'going',
  'mock',
  'tech',
  'nerds',
  'coming',
  'sxsw',
  'stand',
  'four',
  'hour',
  'line',
  'ipad',
  'two',
  'remembered',
  'horror',
  'movies'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['rt',
  'rt',
  'officially',
  'sxsw',
  'come',
  'grill',
  'mention',
  'us',
  'w',
  'zazzlsxsw',
  'get',
  'make',
  'iphone',
  'case'],
 ['softlayer',
  'blog',
  'softlayer',
  'sxsw',
  'server',
  'challenge',
  'video',
  'tried',
  'yet',
  'ipad',
  'two',
  'could'],
 ['watching',
  'man',
  'game',
  'radisson',
  'waiting',
  'next',
  'talk',
  'ipad',
  'vs',
  'android',
  'sxsw'],
 ['rt',
  'rt',
  'google',
  'launch',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw',
  'sxswi'],
 ['sxsw', 'forty', 'one', 'shades', 'blue', 'test'],
 ['freaking', 'computer', 'went', 'psycho', 'ruined', 'life', 'thanks', 'lot'],
 ['continuum',
  'attitudes',
  'crowdsourcing',
  'gap',
  'hear',
  'apple',
  'tell',
  'sxsw'],
 ['rt',
  'think',
  'effing',
  'hubby',
  'line',
  'ipad',
  'two',
  'someone',
  'point',
  'towards',
  'line',
  'wife',
  'number',
  'two',
  'sxswi',
  'sxsw'],
 ['even', 'begins', 'apple', 'wins', 'sxsw', 'via'],
 ['check',
  'smyle',
  'android',
  'web',
  'group',
  'chat',
  'shared',
  'location',
  'media',
  'whiteboarding',
  'thanks',
  'sxsw',
  'app'],
 ['cc',
  'rt',
  'new',
  'ubersocial',
  'iphone',
  'app',
  'store',
  'includes',
  'uberguide',
  'sxsw',
  'cont'],
 ['rt',
  'walkin',
  'street',
  'navigating',
  'via',
  'google',
  'tweeting',
  'random',
  'guy',
  'yelping',
  'welcome',
  'sxsw',
  'usguys'],
 ['sxswnui', 'sxsw', 'xwave', 'control', 'iphone', 'brain'],
 ['someone', 'using', 'right', 'apple', 'store', 'better', 'sxsw', 'pop'],
 ['exclusive',
  'apple',
  'ipad',
  'two',
  'review',
  'still',
  'better',
  'rest',
  'bnet',
  'biz',
  'ipad',
  'two',
  'apple',
  'sxsw',
  'ipad'],
 ['filmaster',
  'iphone',
  'app',
  'foursquare',
  'cinemagoers',
  'api',
  'getglue',
  'iphone',
  'sxsw'],
 ['android', 'developers', 'going', 'sxsw'],
 ['ten', 'iphone', 'apps', 'probably', 'need', 'use', 'sxsw'],
 ['playing',
  'w',
  'windows',
  'seven',
  'phone',
  'sxsw',
  'animation',
  'better',
  'iphone',
  'look',
  'interesting'],
 ['rt',
  'rt',
  'rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'sxsw',
  'rt'],
 ['improve', 'website', 'rankings', 'advice', 'google', 'bing', 'sxsw'],
 ['never',
  'thought',
  'would',
  'sitting',
  'floor',
  'austin',
  'convention',
  'center',
  'best',
  'place',
  'plug',
  'iphone',
  'charger',
  'sxsw'],
 ['anyone', 'sxsw', 'bought', 'new', 'ipad', 'want', 'sell', 'older', 'ipad'],
 ['anyone',
  'else',
  'trouble',
  'synching',
  'schedule',
  'android',
  'sxsw',
  'go',
  'app',
  'sxsw'],
 ['zite',
  'intelligent',
  'ipad',
  'magazine',
  'deliciousness',
  'sxsw',
  'trending',
  'youneedthis'],
 ['first',
  'person',
  'stop',
  'booth',
  'sxsw',
  'show',
  'ipad',
  'two',
  'running',
  'one',
  'apps',
  'wins',
  'free',
  'snakeheead',
  'tee',
  'shirt',
  'sxsw'],
 ['aol',
  'mobile',
  'first',
  'group',
  'steps',
  'stage',
  'play',
  'instagram',
  'music',
  'android',
  'aol',
  'iphone',
  'sollipman',
  'sxsw'],
 ['iphone', 'four', 'ever', 'created'],
 ['google',
  'coming',
  'social',
  'network',
  'sxsw',
  'mean',
  'working',
  'something',
  'though',
  'technews'],
 ['google',
  'party',
  'maggie',
  'maes',
  'rocks',
  'like',
  'one',
  'thousand',
  'nine',
  'hundred',
  'eighty',
  'six',
  'sxsw'],
 ['picked', 'white', 'ipad', 'two', 'pop', 'apple', 'store', 'sxsw'],
 ['sxsw', 'forget', 'come', 'privacybootcamp', 'startups'],
 ['rt',
  'intending',
  'bring',
  'trusty',
  'backpack',
  'upcoming',
  'trip',
  'sxsw',
  'number',
  'ipad',
  'two',
  'helping',
  'b'],
 ['cool',
  'rt',
  'apple',
  'opened',
  'makeshift',
  'store',
  'sxsw',
  'ipad',
  'two',
  'available',
  'five',
  'pm',
  'today',
  'tempted'],
 ['hello',
  'gigantic',
  'line',
  'outside',
  'google',
  'v',
  'bing',
  'seo',
  'session',
  'sxsw',
  'sxswi'],
 ['paper',
  'phones',
  'means',
  'ipad',
  'likely',
  'useless',
  'sxsw',
  'well',
  'fail'],
 ['watching',
  'marissa',
  'mayer',
  'talk',
  'advanced',
  'future',
  'google',
  'location',
  'based',
  'augmented',
  'reality',
  'projects',
  'cool',
  'sxsw',
  'sxswi'],
 ['clipboard', 'carny', 'ipad', 'lowtech', 'sxsw'],
 ['fuck'],
 ['sxsw',
  'world',
  'really',
  'needs',
  'google',
  'circles',
  'fb',
  'implement',
  'eventually'],
 ['great',
  'see',
  'rt',
  'austin',
  'convention',
  'center',
  'today',
  'w',
  'fam',
  'showing',
  'new',
  'iphone',
  'game',
  'sxsw'],
 ['watched',
  'ipad',
  'design',
  'headaches',
  'sxsw',
  'buttons',
  'hack',
  'tapworthy'],
 ['sxsw', 'sxprotect', 'google', 'doc', 'get', 'relevant', 'links', 'panel'],
 ['sxsw',
  'photography',
  'android',
  'many',
  'live',
  'photos',
  'watch',
  'live',
  'feed'],
 ['failure',
  'google',
  'buzz',
  'google',
  'latitude',
  'google',
  'circle',
  'seriously',
  'google',
  'needs',
  'concentrate',
```

```
  'search',
  'fail',
  'google',
  'sxsw'],
 ['sxsw',
  'folk',
  'looking',
  'ipad',
  'two',
  'pop',
  'apple',
  'store',
  'still',
  'stock',
  'colleague',
  'picked',
  'one',
  'protip'],
 ['crazy',
  'apple',
  'opening',
  'temporary',
  'store',
  'austin',
  'tomorrow',
  'handle',
  'rabid',
  'sxsw',
  'eye',
  'pad',
  'seekers'],
 ['rt',
  'scenes',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'pop',
  'shop',
  'arriving',
  'sxsw',
  'cnnmoneysxsw'],
 ['rt', 'partying', 'android', 'sxsw', 'lustre', 'pearl'],
 ['press',
  'lounge',
  'sxsw',
  'someone',
  'getting',
  'tutorial',
  'use',
  'touchpad',
  'apple',
  'laptop',
  'honest'],
 ['fifteen',
  'minutes',
  'left',
  'line',
  'ipad',
  'sxsw',
  'think',
  'going',
  'bail',
  'butt',
  'asleep',
  'notreally'],
 ['three',
  'five',
  'available',
  'android',
  'five',
  'absolute',
  'must',
  'apps',
  'rock',
  'sxsw',
  'interactive',
  'via'],
 ['rt',
  'happy',
  'discovr',
  'named',
  'one',
  'top',
  'ten',
  'must',
  'apps',
  'ipad',
  'two',
  'fight',
  'way',
  'thru',
  'queue',
  'sxsw'],
 ['today', 'charger', 'broken', 'help', 'please'],
 ['many',
  'folks',
  'asked',
  'iphone',
  'battery',
  'case',
  'link',
  'sxsw',
  'fb',
  'li'],
 ['score',
  'rt',
  'google',
  'handing',
  'free',
  'pi',
  'pi',
  'day',
  'sxsw',
  'win'],
 ['rt',
  'send',
  'waaaambulance',
  'rt',
  'get',
  'ipad',
  'two',
  'sxsw',
  'yes',
  'depressed'],
 ['hope',
  'may',
  'someday',
  'keynote',
  'swsx',
  'rt',
  'bored',
  'keynote',
  'sxsw',
  'ipad'],
 ['went',
  'whole',
  'day',
  'w',
  'laptop',
  'used',
  'ipad',
  'one',
  'things',
  'missed',
  'ftp',
  'cloudapp',
  'fast',
  'typing',
  'skype',
  'ipad',
  'sxsw'],
 ['press', 'coverage', 'life', 'standing', 'apple', 'line', 'sxsw'],
 ['fuck',
  'apple',
  'allowing',
  'people',
  'access',
  'camera',
  'phone',
  'locked',
  'fuck',
  'fuck'],
 ['viagra',
  'communications',
  'launches',
  'android',
  'app',
  'sxsw',
  'happy',
  'see',
  'expansion',
  'beyond',
  'outlook',
  'plugin'],
 ['content',
  'move',
  'back',
  'browser',
  'replicate',
  'work',
  'ipad',
  'press',
  'one',
  'button',
  'sxsw'],
 ['apple', 'pops', 'store', 'sxsw', 'event', 'via', 'sxsw'],
 ['going',
  'hang',
  'ipad',
  'hacked',
  'nook',
  'around',
  'neck',
  'week',
  'become',
  'flava',
  'flav',
  'sxsw',
  'top',
  'hipsters',
  'gsdm'],
 ['also', 'wtf', 'even', 'live', 'kirkby'],
 ['google',
  'expensive',
  'mobile',
  'data',
  'plans',
  'killing',
  'flavor',
  'contextual',
  'discovery',
  'abroad',
  'sxsw',
  'pnid'],
 ['rt',
  'studio',
  'forty',
  'five',
  'zero',
  'ft',
  'one',
  'outlet',
  'four',
  'computers',
  'need',
  'batteries',
  'future'],
 ['found',
  'bbq',
  'sauce',
  'ipad',
  'tech',
  'texas',
  'really',
  'come',
  'together',
  'sxsw'],
 ['rt',
  'get',
  'hot',
  'latest',
  'version',
  'whrrl',
  'available',
  'today',
  'android',
  'iphone',
  'blackberry',
  'whrrl',
  'blackberry',
  'sxsw'],
 ['watch', 'sxsw', 'ecademy'],
 ['rt',
  'reason',
  'nineteen',
  'keep',
  'parakeets',
  'employed',
  'keep',
  'track',
  'ladies',
  'sxsw'],
 ['phones',
  'around',
  'blackberry',
  'iphone',
  'android',
  'distant',
  'third',
  'sxsw'],
 ['rt',
  'one',
  'fav',
  'photos',
  'sxsw',
  'far',
  'google',
  'sxsw',
  'plixi',
  'com',
  'p',
  'eighty',
  'three',
  'million',
  'eight',
  'hundred',
  'eighty',
  'one',
  'thousand',
  'five',
  'hundred',
  'eighty',
  'six'],
 ['rt',
  'trying',
  'contact',
  'friends',
  'family',
  'japan',
  'created',
  'person',
  'finder',
  'sxsw'],
 ['read',
  'groupme',
  'sxsw',
  'sounds',
  'like',
  'incredible',
  'app',
  'available',
  'android',
  'phones',
  'yet'],
 ['verizon',
  'iphone',
  'customers',
  'complained',
  'time',
  'fell',
  'back',
  'hour',
  'weekend',
  'course',
  'new',
  'yorkers',
  'attended',
  'sxsw'],
 ['rt',
  'packed',
  'house',
  'go',
  'lynn',
  'designing',
  'ipad',
  'interfaces',
  'new',
  'navigation',
  'schemas',
  'sxsw',
  'uxdes'],
 ['got',
  'custome',
  'iphone',
  'four',
  'case',
  'sxsw',
  'artwork',
  'favorite',
  'blackbook',
  'piece'],
 ['please', 'send', 'fuckin', 'phone'],
 ['hiring',
  'marketers',
  'designers',
  'creatives',
  'social',
  'media',
  'pros',
  'come',
  'see',
  'aquent',
  'booth',
  'one',
  'thousand',
  'four',
  'hundred',
  'fifteen',
  'sxsw',
  'trade',
  'show',
  'might',
  'win',
  'ipad',
  'two'],
 ['mint',
  'com',
  'confines',
  'coding',
  'iphone',
  'app',
  'luxury',
  'worry',
  'learning',
  'different',
  'phone',
  'versions',
  'sxsw',
  'gsdm',
  'sxswmobileapps'],
 ['rt',
  'tomorrow',
  'panel',
  'css',
  'features',
  'folks',
  'opera',
  'chrome',
  'ie',
  'mozilla',
  'w',
  'three',
  'c',
  'apple',
  'downstairs',
  'selling',
  'ipads',
  'sxsw'],
 ['said',
  'able',
  'get',
  'ipad',
  'two',
  'sxsw',
  'apple',
  'opening',
  'pop',
  'store',
  'austin',
  'sxsw'],
 ['rt',
  'studio',
  'forty',
  'five',
  'zero',
  'ft',
  'one',
  'outlet',
  'four',
  'computers',
  'need',
  'batteries',
  'future'],
 ['new',
  'ipad',
  'apps',
  'speech',
  'therapy',
  'communication',
  'showcased',
  'sxsw',
  'conference',
  'sxswi',
  'sxsh',
  'sxswh',
  'hcsm',
  'slp'],
 ['cannot',
  'believe',
  'google',
  'announced',
  'maggie',
  'maes',
  'game',
  'changer',
  'sure',
  'sxsw'],
 ['next',
  'presentation',
  'google',
  'marissa',
  'mayer',
  'great',
  'sxsw',
  'austin',
  'convention',
  'center',
  'w'],
 ['charity',
  'implications',
  'rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['rt',
  'next',
  'life',
  'coming',
  'back',
  'ipad',
  'two',
  'women',
  'cannot',
  'keep',
  'hands',
  'thing',
  'sxsw'],
 ['cancel',
  'trip',
  'austin',
  'sxsw',
  'today',
  'weather',
  'found',
  'great',
  'itunes',
  'mix',
  'sxsw',
  'artists',
  'free'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['tools',
  'collaboration',
  'across',
  'boundaries',
  'google',
  'webex',
  'dropbox',
  'whiteboarding',
  'basecamp',
  'join',
  'ipad',
  'sxsw',
  'evolvingworkplace'],
 ['part',
  'journalsim',
  'support',
  'democracy',
  'yes',
  'informed',
  'populous',
  'yes',
  'ipad',
  'focus',
  'support',
  'newsapps',
  'sxsw'],
 ['meetings',
  'line',
  'sxsw',
  'popup',
  'apple',
  'store',
  'ipad',
  'two',
  'love',
  'place'],
 ['rt',
  'phone',
  'went',
  'seventy',
  'eight',
  'twenty',
  'one',
  'please',
  'tell',
  'mathematically',
  'possible'],
 ['awesome',
  'meet',
  'standing',
  'apple',
  'queue',
  'sxsw',
  'yesterday',
  'day',
  'two',
  'cute'],
 ['final',
  'session',
  'today',
  'left',
  'brain',
  'search',
  'google',
  'right',
  'brain',
  'search',
  'x',
  'sxsw',
  'bettersearch'],
 ['former',
  'apple',
  'inc',
  'supply',
  'manager',
  'sentenced',
  'prison',
  'fined',
  'four',
  'five',
  'million',
  'corporate',
  'espionage',
  'aapl',
  'aapl'],
 ['rt', 'apple', 'open', 'pop', 'shop', 'sxsw', 'via'],
 ['cannot',
  'believe',
  'said',
  'melted',
  'keys',
  'mac',
  'pro',
  'warranty',
  'machine',
  'less',
  'year',
  'old',
  'asking',
  'five',
  'hundred',
  'repair'],
 ['c',
  'mon',
  'already',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'via',
  'sxsw'],
 ['settling',
  'first',
  'sxsw',
  'session',
  'battledecks',
  'missed',
  'last',
  'year',
  'would',
  'perfect',
  'time',
  'hollergram',
  'ipad',
  'app'],
 ['slate',
  'see',
  'much',
  'traffic',
  'mobile',
  'safari',
  'app',
  'ipad',
  'sxsw',
  'electricnews'],
 ['sxsw',
  'das',
  'verpixelungsrechtthe',
  'right',
  'house',
  'pixelated',
  'google',
  'street',
  'view',
  'theft',
  'public'],
 ['lol',
  'see',
  'single',
  'pc',
  'user',
  'around',
  'mejust',
  'macbooks',
  'ipads',
  'web',
  'devs',
  'definitely',
  'apple',
  'folks',
  'sxsw',
  'apple'],
 ['friend',
  'new',
  'iphone',
  'photosharing',
  'app',
  'developed',
  'ck',
  'show',
  'support',
  'sxsw'],
 ['apple',
  'brought',
  'five',
  'employees',
  'store',
  'texas',
  'staff',
  'popup',
  'store',
  'sxsw'],
 ['rt',
  'hey',
  'battery',
  'iphone',
  'drops',
  'like',
  'cock',
  'see',
  'gay',
  'porn',
  'xvideos',
  'main',
  'page',
  'fix',
  'shit'],
 ['rt',
  'launching',
  'products',
  'sxsw',
  'plenty',
  'else',
  'circles',
  'new',
  'apps',
  'ftrs'],
 ['google',
  'body',
  'shares',
  'patients',
  'physicians',
  'wow',
  'sharing',
  'data',
  'interactive',
  'anatomy',
  'sxswh',
  'hcinno',
  'sxsw',
  'sxswi'],
 ['think', 'get', 'boss', 'buy', 'new', 'ipads', 'weekend', 'sxsw'],
 ['chris',
  'sacca',
  'tweets',
  'fake',
  'sxsw',
  'beta',
  'invite',
  'follower',
  'swarm',
  'ensues',
  'ipad'],
 ['techcrunch',
  'google',
  'launchrock',
  'vencorps',
  'want',
  'give',
  'thirty',
  'k',
  'best',
  'startups',
  'sxsw',
  'l',
  'facebook'],
 ['ran',
  'apparently',
  'tell',
  'bizzy',
  'android',
  'app',
  'remedied',
  'sxsw',
  'cc'],
 ['iphone',
  'six',
  'fell',
  'two',
  'ft',
  'screen',
  'shattered',
  'like',
  'blown',
  'wants',
  'additional',
  'one',
  'hundred',
  'nine',
  'fix',
  'maybe',
  'make',
  'product',
  'lasts'],
 ['giving', 'away', 'ipad', 'two', 'x', 'boxes', 'books', 'sxsw', 'techenvy'],
 ['rt',
  'mayer',
  'making',
  'clear',
  'google',
  'going',
  'straight',
  'foursquare',
  'gowalla',
  'google',
  'hotpot',
  'sxsw'],
 ['rt', 'true', 'silly', 'iphone', 'get', 'life', 'together'],
 ['sxsw',
  'bound',
  'keep',
  'eye',
  'may',
  'give',
  'away',
  'iphone',
  'case',
  'atx',
  'land'],
 ['rt',
  'google',
  'denies',
  'rumors',
  'launching',
  'circles',
  'sxsw',
  'facebook',
  'google',
  'sxsw'],
 ['walking',
  'pop',
  'apple',
  'store',
  'like',
  'walking',
  'future',
  'ipad',
  'type',
  'computer',
  'sxsw'],
 ['great',
  'see',
  'topics',
  'avoiding',
  'sexy',
  'hot',
  'ipad',
  'conversation',
  'hit',
  'heart',
  'soul',
  'accessibility',
  'developing',
  'world',
  'sxsw'],
 ['winning', 'sxsw', 'day', 'even', 'begins', 'apple'],
 ['dear', 'apple', 'worse', 'service', 'ever'],
 ['google',
  'bing',
  'q',
  'panel',
  'like',
  'world',
  'expensive',
  'seo',
  'consultation',
  'sxsw'],
 ['miami', 'horror', 'tacos', 'bloody', 'marys', 'sxsw'],
 ['hope',
  'apple',
  'enough',
  'foresight',
  'overstock',
  'austin',
  'stores',
  'ipad',
  'two',
  'tomorrow',
  'sxsw'],
 ['really',
  'great',
  'mophie',
  'experience',
  'sxsw',
  'user',
  'three',
  'months',
  'highly',
  'recommend',
  'iphone',
  'four',
  'battery',
  'goodcustomerservice'],
 ['yai',
  'rt',
```

```
  'new',
  'ubersocial',
  'iphone',
  'app',
  'store',
  'includes',
  'uberguide',
  'sxsw',
  'sponsored',
  'cont'],
 ['colleague',
  'culinary',
  'adventure',
  'austin',
  'sxsw',
  'chicken',
  'waffle',
  'tacos',
  'anyone'],
 ['mashable',
  'ipad',
  'two',
  'takes',
  'sxsw',
  'video',
  'ipad',
  'sxsw',
  'gadgets'],
 ['best', 'smartwatch', 'still', 'pebble'],
 ['rt',
  'rt',
  'yes',
  'updated',
  'iphone',
  'app',
  'song',
  'info',
  'twenty',
  'four',
  'seven',
  'stream',
  'others',
  'also',
  'live',
  'video',
  'streaming',
  'sxsw'],
 ['sxsw', 'iphone', 'developers', 'meet', 'crazy', 'packed'],
 ['rt', 'ipad', 'app', 'content', 'needs', 'shallow', 'engaging', 'sxsw'],
 ['think', 'one', 'sxsw', 'iphone', 'three'],
 ['launched',
  'one',
  'st',
  'ipad',
  'app',
  'sxsw',
  'get',
  'details',
  'first',
  'edition',
  'free'],
 ['line', 'ipad', 'two', 'longer', 'today', 'yesterday', 'sxsw', 'fb'],
 ['bringing',
  'heat',
  'show',
  'content',
  'quality',
  'much',
  'likely',
  'rank',
  'sxsw',
  'via',
  'ranking'],
 ['rt',
  'download',
  'new',
  'austin',
  'iphone',
  'app',
  'free',
  'sxsw',
  'thanks',
  'tip',
  'sxsw'],
 ['apple',
  'opens',
  'temporary',
  'store',
  'sxsw',
  'sell',
  'ipad',
  'two',
  'tnw'],
 ['rt',
  'novelty',
  'ipad',
  'news',
  'apps',
  'fades',
  'fast',
  'among',
  'sxsw',
  'delegates'],
 ['rumor',
  'pop',
  'apple',
  'store',
  'sxsw',
  'exists',
  'still',
  'selling',
  'ipads'],
 ['enterprise',
  'developer',
  'agreement',
  'wait',
  'seven',
  'hundred',
  'nineteen',
  'seven',
  'hundred',
  'nineteen',
  'pages'],
 ['rt', 'sxsw', 'iphone', 'charger', 'best', 'friend'],
 ['steve',
  'job',
  'deposition',
  'ipod',
  'lawsuit',
  'could',
  'cost',
  'one',
  'billion',
  'musicbiz',
  'musicindustry',
  'apple'],
 ['latest',
  'moose',
  'tracker',
  'apple',
  'creates',
  'pop',
  'store',
  'downtown',
  'austin',
  'showcase',
  'new',
  'ipad',
  'two',
  'sxsw'],
 ['rt', 'temporary', 'sxsw', 'apple', 'store', 'apple', 'sneaky', 'usual'],
 ['brilliant',
  'hope',
  'plenty',
  'ipads',
  'rt',
  'apple',
  'open',
  'pop',
  'shop',
  'sxsw',
  'report',
  'sxsw'],
 ['sweet',
  'rt',
  'birthday',
  'pressie',
  'iphone',
  'four',
  'got',
  'matching',
  'one',
  'fit',
  'hipsters',
  'sxsw',
  'wkd'],
 ['rt',
  'love',
  'two',
  'entertain',
  'please',
  'grateful',
  'edchat',
  'musedchat',
  'sxsw',
  'sxswi',
  'classical',
  'newtwitter'],
 ['ipad',
  'two',
  'delivery',
  'pop',
  'store',
  'quite',
  'possible',
  'sxsw',
  'sxswi'],
 ['sure',
  'care',
  'first',
  'guy',
  'get',
  'ipad',
  'two',
  'sxsw',
  'unless',
  'post'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw',
  'sxswi',
  'via'],
 ['doodle',
  'competition',
  'invite',
  'kids',
  'create',
  'doodles',
  'winners',
  'put',
  'google',
  'com',
  'celebrate',
  'awesomeness',
  'googledoodle',
  'sxsw'],
 ['apple',
  'opening',
  'temporary',
  'store',
  'close',
  'sxsw',
  'sell',
  'ipad',
  'two',
  'get',
  'influencers',
  'concept'],
 ['rt',
  'rt',
  'going',
  'sxsw',
  'check',
  'w',
  'friends',
  'austin',
  'w',
  'location',
  'based',
  'apps',
  'lbs'],
 ['perfect',
  'session',
  'google',
  'recipes',
  'search',
  'among',
  'things',
  'sxsw'],
 ['two',
  'rt',
  'best',
  'thing',
  'heard',
  'weekend',
  'sxsw',
  'gave',
  'ipad',
  'two',
  'money',
  'japan',
  'relief',
  'need',
  'ipad',
  'two'],
 ['rt',
  'best',
  'thing',
  'heard',
  'weekend',
  'sxsw',
  'gave',
  'ipad',
  'two',
  'money',
  'japan',
  'relief',
  'need',
  'ipad',
  'two'],
 ['add', 'apple', 'pop', 'shop', 'sxsw', 'list'],
 ['z',
  'sixteen',
  'saving',
  'grace',
  'codes',
  'valid',
  'four',
  'zero',
  'seven',
  'fifty',
  'nine',
  'fifty',
  'nine',
  'p',
  'three',
  'twelve',
  'eleven',
  'infektd',
  'sxsw',
  'zlf'],
 ['sxsw',
  'thirsty',
  'gadget',
  'using',
  'charge',
  'anywhere',
  'iphone',
  'happy',
  'share',
  'juice'],
 ['current',
  'sxsw',
  'plan',
  'paper',
  'notepad',
  'viztalk',
  'iphone',
  'ipad',
  'keyboard',
  'computer',
  'netbook',
  'laptop',
  'going',
  'ultralite'],
 ['hate',
  'phone',
  'cannot',
  'use',
  'gone',
  'completely',
  'silent',
  'call',
  'would',
  'get',
  'even',
  'less',
  'help',
  'get'],
 ['fuck', 'n', 'weak', 'ass', 'iphone'],
 ['awesome', 'traded', 'sxsw', 'last', 'year', 'ipad', 'one'],
 ['computer',
  'droid',
  'rt',
  'agnerd',
  'confession',
  'using',
  'laptop',
  'ipad',
  'blackberry',
  'follow',
  'sxsw',
  'afar',
  'see',
  'agchat'],
 ['apple',
  'follow',
  'customers',
  'sxsw',
  'forbes',
  'alcoholics',
  'call',
  'enabling',
  'rest',
  'us',
  'call',
  'genius'],
 ['word',
  'demographic',
  'synonyms',
  'attached',
  'dictionary',
  'application',
  'incompetence'],
 ['rt',
  'new',
  'post',
  'three',
  'iphone',
  'apps',
  'using',
  'south',
  'southwest',
  'interactive',
  'sxsw',
  'sxswi'],
 ['google',
  'recreated',
  'code',
  'pac',
  'man',
  'doodle',
  'original',
  'bugs',
  'included',
  'sxsw',
  'googledoodles'],
 ['took',
  'away',
  'lego',
  'pit',
  'replaced',
  'recharging',
  'station',
  'sxsw',
  'might',
  'check',
  'prices',
  'iphone',
  'crap',
  'samsung',
  'android'],
 ['love',
  'rt',
  'rt',
  'rumor',
  'apple',
  'open',
  'temporary',
  'store',
  'dt',
  'atx',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['gsd', 'google', 'sitting', 'tree', 'sxsw', 'gsdm'],
 ['rt',
  'google',
  'could',
  'search',
  'engines',
  'google',
  'instead',
  'useful',
  'information',
  'savebrands',
  'sxsw'],
 ['apple',
  'inc',
  'doomed',
  'aapl',
  'dropped',
  'one',
  'fifty',
  'four',
  'currently',
  'priced',
  'one',
  'hundred',
  'thirteen',
  'three',
  'aapl'],
 ['line',
  'six',
  'th',
  'congress',
  'enter',
  'new',
  'apple',
  'store',
  'wraps',
  'around',
  'two',
  'blocks',
  'sxsw'],
 ['rt', 'apple', 'store', 'austin', 'sxsw'],
 ['good',
  'meet',
  'see',
  'forget',
  'mindjet',
  'giving',
  'away',
  'ipad',
  'best',
  'mindmanager',
  'map',
  'sxswi',
  'details'],
 ['sxsw',
  'folks',
  'taking',
  'notes',
  'ipad',
  'sure',
  'download',
  'dan',
  'bricklin',
  'app',
  'notetaker',
  'really',
  'sweet',
  'thanks'],
 ['rt',
  'scoping',
  'venue',
  'four',
  'cloudcamp',
  'austin',
  'valhalla',
  'lounge',
  'great',
  'whiskey',
  'beer',
  'plus',
  'demolition',
  'man',
  'pinball',
  'sxsw'],
 ['rt',
  'sxsw',
  'could',
  'spend',
  'teaching',
  'theater',
  'alone',
  'look',
  'schedule'],
 ['jenny', 'got', 'number', 'sxsw', 'google'],
 ['one',
  'thousand',
  'one',
  'hundred',
  'fifty',
  'four',
  'free',
  'songs',
  'sxsw',
  'year',
  'alone'],
 ['believe', 'still', 'given', 'nature', 'accused', 'disgusting'],
 ['rt',
  'v',
  'interesting',
  'rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['pdparticle',
  'said',
  'able',
  'get',
  'ipad',
  'two',
  'sxsw',
  'apple',
  'opening',
  'pop',
  'store'],
 ['founder', 'confirms', 'new', 'iphone', 'summer', 'sxsw'],
 ['david',
  'carr',
  'nyt',
  'austin',
  'giving',
  'drunken',
  'interview',
  'cnn',
  'wants',
  'app',
  'transport',
  'around',
  'nyc',
  'sits',
  'ipad',
  'sxsw'],
 ['saw',
  'r',
  'going',
  'sxsw',
  'dwnld',
  'groundlink',
  'app',
  'ride',
  'ten',
  'austin',
  'sxswi',
  'see',
  'us',
  'booth',
  'four',
  'hundred',
  'thirty',
  'seven'],
 ['android', 'rt', 'ten', 'new', 'mobile', 'apps', 'using', 'sxsw'],
 ['insane', 'even', 'reason', 'go', 'sxsw', 'sxsw', 'appletogo'],
 ['fact',
  'going',
  'assume',
  'priori',
  'everyone',
  'sitting',
  'departure',
  'terminal',
  'playing',
  'apple',
  'product',
  'going',
  'sxsw'],
 ['flash',
  'crash',
  'really',
  'screwed',
  'lot',
  'traders',
  'today',
  'determined',
  'ever',
  'make',
  'trading',
  'work',
  'aapl'],
 ['storage', 'left', 'fuck'],
 ['happened',
  'several',
  'times',
  'fuck',
  'deleted',
  'rivals',
  'music',
  'ipods',
  'years'],
 ['flying',
  'sxsw',
  'wants',
  'free',
  'miles',
  'dm',
  'shoot',
  'code',
  'currently',
  'iphone'],
 ['xcode', 'aapl', 'source', 'kit', 'crash', 'swift', 'getting', 'annoying'],
 ['iphone',
  'user',
  'friends',
  'keep',
  'borrowing',
  'verizon',
  'iphone',
  'chk',
  'sxsw',
  'schedules',
  'networks',
  'ridiculously',
  'slow'],
 ['rt',
  'cool',
  'apple',
  'open',
  'temporary',
  'store',
  'sxsw',
  'sxsw',
  'peer',
  'pressure',
  'make',
  'buy',
  'ipad',
  'two'],
 ['even', 'begins', 'apple', 'winssxsw', 'via', 'apple', 'sxsw'],
 ['google',
  'launching',
  'new',
  'social',
  'network',
  'today',
  'sxsw',
  'socialmedia'],
 ['monday', 'night', 'sxsw', 'sxswbuffalo', 'win', 'ipad'],
 ['rt',
  'rt',
  'traveling',
  'sxsw',
  'ipad',
  'one',
  'three',
  'ten',
  'two',
  'thousand',
  'eleven'],
 ['apple',
  'trillion',
  'dollar',
  'company',
  'according',
  'billionaire',
  'vc',
  'jim',
  'breyer',
  'aapl'],
 ['sxsw',
  'movers',
  'shakers',
  'publishing',
  'poke',
  'box',
  'ebook',
  'get',
  'involved',
  'rt'],
 ['check',
  'staying',
  'alive',
  'indie',
  'iphone',
  'game',
  'development',
  'survive',
  'sxsw',
  'stayingalive'],
 ['ming',
  'ly',
  'launching',
  'soon',
  'celebrating',
  'giving',
  'away',
  'apple',
  'tv',
  'day',
  'sxsw',
  'launch',
  'via'],
 ['anyone',
  'know',
  'android',
  'devs',
  'sxsw',
  'let',
  'know',
  'startup',
  'need',
  'help'],
 ['zomg',
  'rt',
  'special',
  'apple',
  'store',
  'sxsw',
  'ipad',
  'line',
  'block',
  'long',
  'plixi',
  'com',
  'p',
  'eighty',
  'three',
  'million',
  'three',
  'hundred',
  'twenty',
  'three',
  'thousand',
  'three',
  'hundred',
  'twenty',
  'four',
  'plixi',
  'com',
  'p',
  'eighty',
  'three',
  'million',
  'three',
  'hundred',
  'twenty',
  'three',
  'thousand',
  'four',
  'hundred',
  'fourteen'],
 ['setup',
  'sxsw',
  'demo',
  'restaurant',
  'page',
  'sign',
  'download',
  'iphone',
  'app',
  'check',
  'say',
  'hi',
  'sxswi'],
 ['line',
  'apple',
  'sxsw',
  'pop',
  'store',
  'austin',
  'hot',
  'sunny',
  'apple',
  'employees',
  'delivered',
  'smart',
  'water',
  'line',
  'wow',
  'one',
  'hr',
  'go'],
 ['lightbox',
  'photos',
  'wants',
  'new',
  'android',
  'camera',
  'app',
  'sxsw',
  'techcrunch',
  'sxsw',
  'android'],
 ['first',
  'line',
  'morning',
  'apple',
  'pop',
  'store',
  'austin',
  'caught',
  'morning',
  'sxsw'],
 ['well',
  'yeah',
  'music',
  'iphone',
  'nerds',
  'rt',
  'god',
  'cute',
  'girls',
  'everywhere',
  'love',
  'interactive',
  'ends',
  'music',
  'begins',
  'sxsw'],
 ['rt',
  'public',
  'service',
  'announcement',
  'grill',
  'amazing',
  'drinks',
  'food',
  'free',
  'great',
  'company',
  'zazzle',
  'ipad',
  'cases',
  'sxsw'],
 ['behind',
  'android',
  'race',
  'one',
  'smartphones',
  'technology',
  'mobile',
  'sxsw',
  'sxswi'],
 ['rt',
  'bought',
  'last',
  'ipad',
  'two',
  'three',
  'g',
  'sixty',
```

```
  'four',
  'mb',
  'apple',
  'pop',
  'store',
  'sxsw',
  'lucky'],
 ['austin',
  'convention',
  'center',
  'today',
  'w',
  'fam',
  'showing',
  'new',
  'iphone',
  'game',
  'sxsw'],
 ['via',
  'apple',
  'store',
  'downtown',
  'austin',
  'open',
  'til',
  'midnight',
  'sxsw'],
 ['tech',
  'lightbox',
  'photos',
  'wants',
  'new',
  'android',
  'camera',
  'app',
  'sxsw',
  'although',
  'android',
  'adoption',
  'technology'],
 ['sweet', 'good', 'ipad', 'two', 'verizon', 'life', 'peaked', 'sxsw'],
 ['one',
  'hundred',
  'forty',
  'one',
  'st',
  'line',
  'ipad',
  'two',
  'sxsw',
  'apple',
  'store',
  'sxsw',
  'w',
  'thirty',
  'eight',
  'others'],
 ['waiting',
  'line',
  'awesome',
  'south',
  'african',
  'contingent',
  'sxswsa',
  'sxsw',
  'apple'],
 ['questions', 'inside', 'ipad', 'two', 'fire', 'way', 'sxsw'],
 ['guys',
  'serious',
  'yosemite',
  'full',
  'stupid',
  'ugly',
  'bugs',
  'feeling',
  'sad',
  'cc'],
 ['check',
  'q',
  'google',
  'bing',
  'website',
  'ranking',
  'sxsw',
  'sxsw',
  'qagb',
  'sxsma'],
 ['listening',
  'google',
  'q',
  'saying',
  'see',
  'yelp',
  'services',
  'going',
  'die',
  'sxsw',
  'far',
  'interesting'],
 ['learned',
  'sponsored',
  'sxsw',
  'software',
  'one',
  'austin',
  'nice',
  'walking',
  'city',
  'two',
  'mapquest',
  'piece',
  'shit',
  'mapping',
  'software',
  'go',
  'google',
  'maps',
  'fb'],
 ['marissa',
  'google',
  'crew',
  'recommend',
  'amy',
  'ice',
  'cream',
  'austin',
  'sxsw'],
 ['need', 'get', 'fucking', 'shit', 'together', 'let', 'txt', 'youtube'],
 ['watching',
  'eight',
  'year',
  'old',
  'report',
  'sxsw',
  'via',
  'iphone',
  'shows',
  'technology',
  'going',
  'anywhere',
  'robots',
  'revolt'],
 ['rt',
  'added',
  'linkedin',
  'hootsuite',
  'mobile',
  'sxsw',
  'updates',
  'iphone',
  'blackberry',
  'android'],
 ['marissa',
  'mayer',
  'presentation',
  'sxsw',
  'demo',
  'google',
  'maps',
  'version',
  'five',
  'two',
  'mobile',
  'pretty',
  'impressive'],
 ['funny',
  'handing',
  'earplugs',
  'sxsw',
  'google',
  'aclu',
  'party',
  'going',
  'announce',
  'bad',
  'news',
  'want',
  'tweeted'],
 ['stupid', 'sxsw', 'find', 'mac', 'game', 'via', 'ipad', 'one', 'two'],
 ['experiment',
  'spending',
  'last',
  'day',
  'sxsw',
  'without',
  'iphone',
  'overtweeting'],
 ['tech',
  'apple',
  'heads',
  'sxsw',
  'sets',
  'temporary',
  'store',
  'austin',
  'apple',
  'going',
  'sxsw',
  'year',
  'technology'],
 ['sweet',
  'new',
  'three',
  'google',
  'maps',
  'demo',
  'going',
  'ballroom',
  'sxsw'],
 ['rt',
  'sxsw',
  'conf',
  'one',
  'every',
  'two',
  'hundred',
  'people',
  'mac',
  'ipad',
  'including',
  'happened',
  'pc',
  'becoming',
  'obsolete'],
 ['google', 'circles', 'first', 'real', 'alternative', 'facebook', 'sxsw'],
 ['may',
  'invites',
  'cool',
  'sxsw',
  'sxswi',
  'parties',
  'two',
  'iphone',
  'chargers',
  'pocket',
  'happy',
  'see'],
 ['holy',
  'crap',
  'sxsw',
  'two',
  'thousand',
  'eleven',
  'showcase',
  'torrents',
  'already',
  'three'],
 ['encourages',
  'marxist',
  'bs',
  'isis',
  'gave',
  'order',
  'two',
  'arrest',
  'marxist',
  'dupes',
  'trespass',
  'pantsupdontloot'],
 ['current',
  'twitter',
  'feed',
  'devastation',
  'japan',
  'parties',
  'panels',
  'sxsw',
  'ipad',
  'two',
  'artifacts',
  'recollections',
  'five',
  'years',
  'ago'],
 ['rt',
  'line',
  'ipad',
  'two',
  'longer',
  'today',
  'yesterday',
  'sxsw',
  'getting',
  'line',
  'today',
  'fun'],
 ['heading',
  'free',
  'google',
  'sponsored',
  'happy',
  'hour',
  'semantic',
  'web',
  'austin',
  'fogo',
  'de',
  'cho',
  'sxsw'],
 ['brian',
  'actually',
  'austin',
  'apple',
  'store',
  'rumor',
  'built',
  'pop',
  'one',
  'sxsw'],
 ['sounds', 'fantastic', 'rt', 'google', 'party', 'awesome', 'sxsw'],
 ['contactless',
  'iphone',
  'payment',
  'system',
  'trialled',
  'visa',
  'anz',
  'bank',
  'due',
  'apple',
  'boycotting',
  'existing',
  'nfc',
  'sxsw'],
 ['cool',
  'rt',
  'rt',
  'rumor',
  'apple',
  'open',
  'temporary',
  'store',
  'dt',
  'atx',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['download',
  'gowalla',
  'three',
  'android',
  'time',
  'sxsw',
  'huh',
  'foliot',
  'international',
  'hq'],
 ['good',
  'know',
  'smart',
  'sure',
  'many',
  'people',
  'need',
  'apple',
  'producs',
  'sxsw',
  'sxswi'],
 ['looks', 'like', 'could', 'get', 'ipad', 'two', 'apple', 'sxsw'],
 ['course',
  'rt',
  'sxsw',
  'ipad',
  'store',
  'sold',
  'everything',
  'except',
  'sixty',
  'four',
  'gig',
  'wifi',
  'white'],
 ['sxsw',
  'two',
  'thousand',
  'eleven',
  'demo',
  'samsung',
  'tv',
  'controlled',
  'android',
  'phone'],
 ['wtf',
  'battery',
  'thirty',
  'one',
  'one',
  'second',
  'ago',
  'twenty',
  'nine',
  'wtf'],
 ['v',
  'one',
  'two',
  'sxsw',
  'go',
  'iphone',
  'ipad',
  'app',
  'live',
  'better',
  'updates',
  'schedule',
  'sync',
  'would',
  'love',
  'know',
  'think'],
 ['rt',
  'last',
  'year',
  'single',
  'ipad',
  'public',
  'sxsw',
  'today',
  'common',
  'laptops',
  'seen',
  'android',
  'tablets'],
 ['google',
  'serves',
  'mobile',
  'location',
  'data',
  'sxsw',
  'wireless',
  'week'],
 ['flight',
  'sf',
  'austin',
  'filled',
  'google',
  'tshirts',
  'youtube',
  'fleeces',
  'sxsw'],
 ['suspense',
  'rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['rt',
  'get',
  'hot',
  'latest',
  'version',
  'whrrl',
  'available',
  'two',
  'day',
  'four',
  'android',
  'iphone',
  'bb',
  'blackberry',
  'sxsw'],
 ['looking',
  'forward',
  'j',
  'roddy',
  'walston',
  'business',
  'sxsw',
  'google',
  'party',
  'vid'],
 ['yes', 'picked', 'ipad', 'two', 'sxsw', 'one', 'st', 'one'],
 ['google',
  'launch',
  'product',
  'wait',
  'launch',
  'product',
  'exists',
  'wait',
  'product',
  'exist',
  'sxsw'],
 ['mayer',
  'opens',
  'questions',
  'brave',
  'girl',
  'google',
  'actual',
  'least',
  'accessible',
  'sxsw'],
 ['rt',
  'tip',
  'iphone',
  'users',
  'turn',
  'screen',
  'brightness',
  'way',
  'conserve',
  'battery',
  'power',
  'huge',
  'difference',
  'sxsw'],
 ['guy',
  'kawasaki',
  'believe',
  'god',
  'explanation',
  'continuous',
  'survival',
  'apple',
  'years',
  'lol',
  'sxsw'],
 ['chromebooks',
  'overtake',
  'apple',
  'ipads',
  'education',
  'market',
  'chromebooks',
  'ipad'],
 ['next',
  'five',
  'googletv',
  'ipad',
  'apps',
  'connected',
  'tv',
  'experience',
  'sxsw',
  'connectedtv'],
 ['looks',
  'like',
  'pop',
  'apple',
  'store',
  'opening',
  'apple',
  'store',
  'employees',
  'emerging',
  'queue',
  'sxsw'],
 ['w',
  'core',
  'week',
  'data',
  'still',
  'come',
  'searches',
  'sxsw',
  'twenty',
  'three',
  'vs',
  'ten',
  'source',
  'trends',
  'measure'],
 ['via',
  'pretty',
  'neat',
  'database',
  'must',
  'say',
  'work',
  'android',
  'shall',
  'see',
  'sxsw',
  'party',
  'free'],
 ['seeing',
  'google',
  'new',
  'maps',
  'mobile',
  'three',
  'buildings',
  'super',
  'fast',
  'rendering',
  'network',
  'sxsw'],
 ['apple', 'popup', 'store', 'line', 'still', 'circles', 'block', 'sxsw'],
 ['rt',
  'want',
  'undivided',
  'attention',
  'please',
  'take',
  'mobile',
  'phones',
  'ipad',
  'two',
  'sxsw',
  'leanstartup'],
 ['sxsw',
  'tried',
  'two',
  'days',
  'ipad',
  'w',
  'macbook',
  'pro',
  'experiment',
  'heart',
  'real',
  'keyboard'],
 ['make', 'iphone', 'case', 'ttye', 'time', 'sxsw', 'want', 'show', 'support'],
 ['rt',
  'well',
  'forget',
  'nfl',
  'lockout',
  'right',
  'going',
  'focus',
  'getting',
  'shinmy',
  'new',
  'ipad',
  'forty',
  'min',
  'sxsw',
  'apple',
  'makes',
  'happy',
  'nfl'],
 ['aight',
  'wed',
  'thurs',
  'list',
  'sxsw',
  'possibilities',
  'hope',
  'see',
  'twitter',
  'buds',
  'atx',
  'week'],
 ['rt',
  'look',
  'everyone',
  'zomg',
  'got',
  'ipad',
  'two',
  'first',
  'day',
  'sxsw'],
 ['never', 'ever', 'buy', 'itouch', 'worthless'],
 ['apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['talking',
  'google',
  'effort',
  'allow',
  'users',
  'open',
  'systems',
  'bettercloud',
  'sxsw'],
 ['rt',
  'anyone',
  'going',
  'buy',
  'new',
  'ipad',
  'donate',
  'japan',
  'tsunami',
  'victims',
  'instead',
  'sxsw'],
 ['actions', 'helping', 'democratswarontruth'],
 ['must',
  'sxsw',
  'app',
  'rt',
  'lovely',
  'review',
  'forbes',
  'sxsw',
  'ipad',
  'app',
  'holler',
  'gram'],
 ['getting',
  'one',
  'rt',
  'line',
  'ipad',
  'two',
  'apple',
  'store',
  'demo',
  'units',
  'five',
  'pm',
  'sxsw',
  'fb'],
 ['ipad',
  'users',
  'slow',
  'resting',
  'heart',
  'rate',
  'leisurely',
  'use',
  'desktops',
  'phones',
  'tapworthy',
  'sxsw'],
 ['seen',
  'temp',
  'apple',
  'store',
  'going',
  'downtown',
  'sxsw',
  'would',
  'stream',
  'instead'],
 ['rt', 'wow', 'developed', 'ipad', 'app', 'fifteen', 'k', 'newsapps', 'sxsw'],
 ['future',
  'contextual',
  'discovery',
  'nice',
  'way',
  'articulating',
  'intersection',
  'social',
  'mobile',
  'search',
  'sxsw'],
 ['wish', 'austin', 'free', 'ipad', 'two', 'sxsw'],
 ['rt', 'get', 'shit', 'together', 'guy', 'samsung', 'galaxy', 'five'],
 ['universal',
  'problem',
  'one',
  'hundred',
  'twenty',
  'eight',
  'gb',
  'models',
  'people',
  'think',
  'total',
  'recall'],
 ['get', 'go', 'work', 'yet', 'trying', 'days', 'sxsw', 'android', 'evo'],
 ['one',
  'says',
  'apple',
  'drupal',
  'tribe',
  'know',
  'people',
  'care',
  'children',
  'powerful',
  'dgtltribe',
  'sxsw'],
 ['phone', 'automatically', 'reason', 'kind', 'dumb', 'thanks'],
 ['sxsw',
  'ten',
  'times',
  'better',
  'luck',
  'verizon',
  'air',
  'card',
  'iphone'],
 ['nope', 'seems', 'google', 'circles', 'launch', 'today', 'sxsw'],
 ['would',
  'love',
  'meet',
  'rt',
  'austin',
  'convention',
  'center',
  'today',
  'w',
  'fam',
  'showing',
  'new',
  'iphone',
  'game',
  'sxsw'],
 ['great',
  'night',
  'interactive',
  'parties',
  'congress',
  'ave',
  'amazing',
  'apple',
  'store',
  'sxsw',
  'apple'],
 ['course',
  'apple',
  'built',
  'temp',
  'store',
  'austin',
  'texas',
  'understand',
  'concept',
  'corralling',
  'cattle',
  'sxsw',
  'pickmeupanipad',
  'two'],
 ['south',
  'southwest',
  'panels',
  'illustrated',
  'pics',
  'sometimes',
  'best',
  'news',
  'ogilvy',
  'sxsw',
  'trending',
  'cyber',
  'iphone'],
 ['sxsw',
  'could',
  'spend',
  'teaching',
  'theater',
  'alone',
  'look',
  'schedule'],
 ['google',
  'reveal',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'socialmedia',
  'facebook',
  'twitter',
  'sxsw',
  'via'],
 ['play',
  'gun',
  'bros',
  'xperia',
  'play',
  'google',
  'league',
  'event',
  'parking',
  'lot',
  'teamandroid',
  'event',
  'xperiaplay',
  'sunday',
  'sxsw'],
 ['google',
  'vp',
  'consumer',
  'products',
  'marissa',
  'mayer',
  'says',
  'location',
  'everything',
  'sxsw'],
 ['reason', 'google', 'social', 'technical', 'sxsw', 'comments'],
 ['session',
  'google',
  'marissa',
  'mayer',
  'presents',
  'sxsw',
  'sxsw',
  'marissagoogle'],
```

```
['apple', 'pop', 'store', 'still', 'ipads', 'sxsw', 'sxswi'],
['beyondbroadcast',
 'sxsw',
 'evaporation',
 'business',
 'model',
 'platform',
 'iphone',
 'app',
 'makes',
 'tools'],
['sxsw',
 'talk',
 'ipad',
 'design',
 'great',
 'examples',
 'insights',
 'picking',
 'copy',
 'book'],
['either',
 'go',
 'sxsw',
 'wait',
 'line',
 'buy',
 'tricked',
 'ipad',
 'mom',
 'birthday',
 'guess',
 'austin'],
['new',
 'sxsw',
 'rule',
 'ooing',
 'ahing',
 'new',
 'ipad',
 'get',
 'big',
 'deal',
 'everybody',
 'one'],
['tons', 'good', 'music', 'free', 'sxsw', 'sampler', 'via'],
['apple',
 'opening',
 'pop',
 'store',
 'austin',
 'sxsw',
 'phew',
 'beginning',
 'panic',
 'thanks',
 'steve',
 'sxsw'],
['sxsw',
 'attendees',
 'come',
 'see',
 'aquent',
 'booth',
 'one',
 'thousand',
 'four',
 'hundred',
 'fifteen',
 'sxsw',
 'trade',
 'show',
 'might',
 'win',
 'ipad',
 'two'],
['bjdproductions',
 'apple',
 'saves',
 'sxsw',
 'set',
 'open',
 'pop',
 'store',
 'tech'],
['rt',
 'rt',
 'love',
 'sxsw',
 'apple',
 'comes',
 'w',
 'cool',
 'technology',
 'one',
 'ever',
 'heard',
 'go',
 'conferences'],
['rt',
 'news',
 'sxswi',
 'apple',
 'temporary',
 'ipad',
 'store',
 'sxsw',
 'wth',
 'yes',
 'think',
 'ultimate',
 'offsite',
 'trade',
 'show',
 'booth'],
['apple',
 'opening',
 'temporary',
 'store',
 'downtown',
 'austin',
 'sxsw',
 'ipad',
 'two',
 'launch'],
['google',
 'maps',
 'mobile',
 'route',
 'options',
 'saves',
 'users',
 'two',
 'yrs',
 'time',
 'every',
 'day',
 'sxsw'],
['major',
 'ipad',
 'design',
 'flaw',
 'sxsw',
 'go',
 'ipad',
 'app',
 'stay',
 'open',
 'switch',
 'apps',
 'ipaddesignheadaches',
 'sxsw'],
['probably',
 'best',
 'keep',
 'away',
 'apple',
 'pop',
 'stores',
 'temptation',
 'get',
 'white',
 'three',
 'g',
 'ipad',
 'sxsw',
 'insanely',
 'tempting'],
['rt',
 'need',
 'new',
 'emojis',
 'preferably',
 'brown',
 'people',
 'shxt',
 'like'],
['talking', 'accessibility', 'found', 'google', 'engineer', 'sxsw', 'iqlab'],
['geen',
 'google',
 'circles',
 'vandaag',
 'rt',
 'launching',
 'products',
 'sxsw',
 'plenty',
 'else'],
['google', 'circles', 'launched', 'sxsw', 'interactive', 'today', 'bummer'],
['guy',
 'next',
 'carefully',
 'studying',
 'best',
 'parties',
 'sxsw',
 'eleven',
 'spreadsheet',
 'made',
 'ipad',
 'ipad',
 'one',
 'n',
 'zero',
 'b'],
['man', 'app', 'tv', 'hot', 'garbage'],
['google', 'marissa', 'mayer', 'awesome', 'sxsw', 'marissagoogle'],
['rt',
 'google',
 'future',
 'power',
 'paired',
 'augmented',
 'reality',
 'contextual',
 'reality',
 'pnid',
 'sxsw'],
['rt',
 'racing',
 'around',
 'sxsw',
 'best',
 'fueling',
 'great',
 'local',
 'fare',
 'eatshopaustinapp'],
['frankenstein',
 'amalgamation',
 'fragmented',
 'digital',
 'identities',
 'becoming',
 'anti',
 'schizophrenic',
 'google',
 'ai',
 'sm',
 'sci',
 'fi',
 'sxsw'],
['rt',
 'yeah',
 'love',
 'google',
 'cheese',
 'w',
 'maggie',
 'mae',
 'pic',
 'sxsw'],
['anyone',
 'lost',
 'iphone',
 'back',
 'cab',
 'downtown',
 'austin',
 'around',
 'ten',
 'thirty',
 'eleven',
 'p',
 'tonight',
 'please',
 'hit',
 'sxsw'],
['rt',
 'spent',
 'aftrnoon',
 'frozen',
 'lake',
 'photographing',
 'brother',
 'scott',
 'team',
 'catch',
 'sxsw',
 'ths',
 'weeknd'],
['missed',
 'check',
 'google',
 'doodles',
 'burning',
 'man',
 'pac',
 'man',
 'beyond',
 'sxsw'],
['rt',
 'rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'possibly',
 'today',
 'sxsw',
 'via'],
['hurrah',
 'sxswi',
 'festivities',
 'begun',
 'met',
 'mozilla',
 'google',
 'folks',
 'tonight',
 'event',
 'sxsw'],
['omg',
 'sign',
 'rt',
 'officially',
 'sxsw',
 'come',
 'grill',
 'get',
 'make',
 'iphone',
 'case'],
['apple',
 'installs',
 'pop',
 'shop',
 'sxsw',
 'apple',
 'setting',
 'special',
 'pop',
 'shop',
 'visitors'],
['rt',
 'p',
 'google',
 'throw',
 'b',
 'tchin',
 'party',
 'shout',
 'spazmatics',
 'sxsw'],
['google',
 'latina',
 'see',
 'find',
 'porn',
 'first',
 'impression',
 'people',
 'get',
 'us',
 'latism',
 'sxsw',
 'sxswlatam',
 'latinasintech'],
['new',
 'competition',
 'q',
 'two',
 'google',
 'check',
 'offers',
 'sxsw',
 'smccolumbus'],
['cannot',
 'take',
 'hands',
 'iphone',
 'even',
 'charging',
 'zero',
 'juice',
 'left',
 'appleaddiction',
 'sxsw'],
['anyone', 'know', 'apple', 'popup', 'store', 'sxsw', 'still', 'stock'],
['rt',
 'google',
 'maps',
 'usage',
 'mobile',
 'exceeded',
 'desktop',
 'usage',
 'xmas',
 'new',
 'years',
 'day',
 'first',
 'time',
 'marissa',
 'mayer',
 'sxsw'],
['rt',
 'live',
 'tweeting',
 'sxsw',
 'rt',
 'users',
 'drive',
 'twelve',
 'b',
 'miles',
 'year',
 'google',
 'maps',
 'navigation',
 'jr'],
['rt',
 'shut',
 'rt',
 'rumor',
 'apple',
 'opening',
 'temp',
 'store',
 'downtown',
 'austin',
 'sxsw',
 'ipad',
 'two',
 'launch'],
['lovin',
 'digital',
 'band',
 'sings',
 'iphone',
 'plays',
 'guitar',
 'app',
 'fans',
 'record',
 'vids',
 'ipad',
 'two',
 'cnn',
 'digital',
 'cnngrill',
 'sxsw',
 'sxswi'],
['pop', 'apple', 'store', 'seems', 'pop', 'ipad', 'two', 'sxsw'],
['day',
 'two',
 'late',
 'night',
 'parties',
 'packed',
 'nine',
 'thirty',
 'session',
 'designing',
 'ipad',
 'swoon',
 'nerdcore',
 'sxsw',
 'fb'],
['next', 'sxswi', 'mom', 'ipad', 'designing', 'boomers', 'sxsw', 'sxswi'],
['make',
 'better',
 'chargers',
 'fam',
 'make',
 'cheaper',
 'cuz',
 'right',
 'getting',
 'job',
 'done'],
['rt',
 'hoot',
 'new',
 'blog',
 'post',
 'hootsuite',
 'mobile',
 'sxsw',
 'updates',
 'iphone',
 'blackberry',
 'android'],
['let',
 'us',
 'see',
 'google',
 'gets',
 'sm',
 'right',
 'time',
 'rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'sxsw'],
['wonder',
 'google',
 'impactdashboard',
 'demoed',
 'become',
 'part',
 'google',
 'analytics',
 'bavcid',
 'sxsw'],
['rt',
 'google',
 'four',
 'people',
 'work',
 'seven',
 'people',
 'rather',
 'seven',
 'people',
 'work',
 'four',
 'agileagency',
 'sxsw'],
['google',
 'plans',
 'bring',
 'power',
 'life',
 'future',
 'linking',
 'digital',
 'physical',
 'worlds',
 'sxsw'],
['dismiss',
 'call',
 'comes',
 'miss',
 'call',
 'cannot',
 'notification',
 'accurately',
 'reflect',
 'action'],
['google',
 'competition',
 'task',
 'management',
 'solutions',
 'paper',
 'sxsw',
 'sxswdad'],
['enjoying',
 'rooftop',
 'terrace',
 'speakeasy',
 'reassured',
 'extraordinary',
 'hacking',
 'google',
 'meant',
 'soft',
 'couches',
 'bar',
 'sxsw'],
['ten',
 'minutes',
 'til',
 'marissa',
 'mayer',
 'google',
 'takes',
 'stage',
 'sxsw'],
['trying',
 'get',
 'google',
 'eighty',
 'retro',
 'party',
 'maggie',
 'mae',
 'line',
 'huge',
 'hope',
 'worth',
 'wait',
 'sxsw',
 'sxsw',
 'two',
 'thousand',
 'eleven'],
['wish', 'went', 'sxsw', 'got', 'covered', 'day', 'one', 'recap', 'coyne'],
['rt',
 'rt',
 'another',
 'great',
 'panel',
 'five',
 'pm',
 'hilton',
 'austin',
 'left',
 'brain',
 'search',
 'google',
 'right',
 'brain',
 'search',
 'x',
 'sxsw'],
['google',
 'street',
 'view',
 'car',
 'six',
 'th',
 'brazos',
 'timing',
 'everything',
 'sxsw'],
['awesome',
 'presentation',
 'digital',
 'magazines',
 'touchingstories',
 'sxsw',
 'gsdm'],
['mom',
 'ipad',
 'session',
 'sxsw',
 'acc',
 'ballroom',
 'b',
 'w',
 'twenty',
 'three',
 'others'],
['listening',
 'google',
 'marissa',
 'mayer',
 'discuss',
 'new',
 'products',
 'including',
 'google',
 'hotpot',
 'watch',
 'yelp',
 'sxsw'],
['google', 'looking', 'launch', 'new', 'social', 'sxsw'],
['free', 'tunes', 'year', 'sxsw', 'artists'],
['rt',
 'google',
 'latitude',
 'check',
 'ins',
 'follow',
 'foursquare',
 'rewards',
 'sxsw',
 'free',
 'googlela',
 'googlemarch',
 'sxsw'],
['rt',
 'launching',
 'products',
 'sxsw',
 'plenty',
 'else',
 'join',
 'us',
 'h',
 'four',
 'ckers',
 'eighty',
 'dancing'],
['apple', 'selfish', 'brand', 'microsoft', 'served', 'brand', 'well', 'sxsw'],
['agency', 'people', 'sxsw', 'queue', 'pop', 'ipad', 'store', 'savesxsw'],
['thank', 'retweeting', 'rt', 'apple', 'store', 'sxsw', 'info'],
['rt',
 'rt',
 'free',
 'itunes',
 'album',
 'sxsw',
 'featured',
 'artists',
 'grab',
 'missed'],
['jonathan',
 'zaggle',
 'showed',
 'us',
 'cool',
 'free',
 'texting',
 'app',
 'iphone',
 'called',
 'zms',
 'sxsw'],
['marissa',
 'mayer',
 'google',
 'connect',
 'digital',
 'physical',
 'worlds',
 'mobile',
 'sxsw',
 'via'],
['iphone',
 'version',
 'flipboard',
 'totally',
 'redesigned',
 'platform',
 'says',
 'sxsw'],
['apple',
 'tv',
 'fades',
 'away',
 'streaming',
 'video',
 'player',
 'market',
 'vod',
 'streaming'],
['google',
 'maps',
 'five',
 'zero',
 'guys',
 'huge',
 'google',
 'marissa',
 'mayer',
 'sxsw'],
['rt',
 'perfect',
 'sxsw',
 'iphone',
 'app',
 'home',
 'screen',
 'organization',
 'like'],
['excited',
 'meet',
 'sxsw',
 'show',
 'sprint',
 'galaxy',
 'still',
 'running',
 'android',
 'two',
 'one',
 'fail'],
['interesting',
 'rt',
 'google',
 'launch',
 'major',
 'new',
 'social',
 'network',
 'called',
 'circles',
 'possibly',
 'today',
 'sxsw'],
['old', 'iphone', 'exploded', 'good', 'reason', 'heck'],
['rt',
 'umm',
 'would',
 'keep',
 'winning',
 'shit',
 'thanks',
 'killer',
 'ipad',
 'case',
 'sxsw'],
['lolol',
 'stupid',
 'phone',
 'say',
 'best',
 'varied',
 'sort',
 'phone',
 'apols'],
['well',
 'hear',
 'someone',
 'going',
 'setup',
 'pop',
 'apple',
 'store',
 'sxsw',
 'oh',
 'wait',
 'fruit'],
['audience',
 'q',
 'prototyping',
 'tools',
 'use',
 'sketchbooks',
 'sharpie',
 'pens',
 'photoshop',
 'balsamic',
 'google',
 'docs',
 'axsure',
 'etc',
 'myprototype',
 'sxsw'],
['great',
 'way',
 'prep',
 'rt',
 'download',
 'twenty',
 'free',
 'tracks',
 'sxsw',
 'music',
 'sampler',
 'available'],
['rt',
 'fret',
 'iphone',
 'owners',
 'apple',
 'open',
 'temporary',
 'store',
 'sxsw',
 'via'],
['google', 'takes', 'stage', 'talk', 'location', 'future', 'maps', 'sxsw'],
['doh', 'share', 'pic', 'update', 'ipad', 'since', 'sxsw', 'mail', 'shirt'],
['rt',
 'free',
 'payments',
 'android',
 'platform',
 'webinar',
 'march',
 'thirty',
 'th',
 'register',
 'today',
 'sxsw',
 'mr'],
['got',
 'copy',
 'enchantment',
 'ipad',
 'kindle',
 'today',
 'excited',
 'thanks',
 'keeping',
 'world',
 'enchanted',
 'glad',
 'sxsw'],
['rt',
 'sxsw',
 'sxswparty',
 'matt',
 'damon',
 'upstairs',
 'google',
 'party',
 'maggie',
 'maes',
 'six',
 'th',
 'st'],
['apple',
 'opening',
 'temporary',
 'store',
 'sxsw',
```

```
  'conference',
  'ipad',
  'two',
  'launch',
  'might',
  'make',
  'stop'],
 ['sxsw', 'google', 'asks', 'want', 'know'],
 ['leaving',
  'excellent',
  'panel',
  'writing',
  'compelling',
  'content',
  'android',
  'dev',
  'meetup',
  'sxsw'],
 ['cnet',
  'story',
  'apple',
  'schooling',
  'social',
  'marketing',
  'execs',
  'sxsw',
  'pop',
  'ipad',
  'two',
  'launch'],
 ['rt', 'one', 'fav', 'photos', 'sxsw', 'far', 'google', 'sxsw'],
 ['tip',
  'turn',
  'push',
  'set',
  'fetch',
  'manual',
  'mode',
  'email',
  'mail',
  'contacts',
  'cal',
  'fetch',
  'new',
  'data',
  'saves',
  'battery',
  'iphone',
  'sxsw'],
 ['sxsw', 'sponsored', 'apple', 'plaid', 'boys', 'attracted'],
 ['smartphone',
  'breakdown',
  'sxsw',
  'unofficial',
  'ninety',
  'eight',
  'five',
  'iphones',
  'one',
  'android',
  'three',
  'blackberry',
  'two',
  'symbian',
  'windows'],
 ['hoot',
  'rt',
  'new',
  'blog',
  'post',
  'hootsuite',
  'mobile',
  'sxsw',
  'updates',
  'iphone',
  'b'],
 ['waiting', 'google', 'keynote', 'start', 'sxsw'],
 ['sxsw',
  'already',
  'kind',
  'happening',
  'google',
  'tries',
  'refine',
  'searches',
  'protect',
  'smut'],
 ['rt',
  'new',
  'ubersocial',
  'iphone',
  'app',
  'store',
  'includes',
  'uberguide',
  'sxsw',
  'sponsored',
  'mashable'],
 ['informal',
  'unscientific',
  'observation',
  'apple',
  'far',
  'computer',
  'choice',
  'sxsw',
  'hands',
  'contest'],
 ['rt',
  'cool',
  'came',
  'travolta',
  'line',
  'broken',
  'arrow',
  'sxsw',
  'thought',
  'two',
  'steve',
  'first',
  'apple'],
 ['rt',
  'rt',
  'rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['letting',
  'interactive',
  'film',
  'closing',
  'music',
  'opening',
  'party',
  'badform',
  'youareinteractive',
  'peopleflowingout',
  'sxsw'],
 ['today',
  'last',
  'day',
  'apple',
  'pop',
  'sxsw',
  'vacation',
  'starts',
  'tomorrow',
  'great',
  'experience'],
 ['debuting',
  'new',
  'iphone',
  'droid',
  'app',
  'sxsw',
  'next',
  'year',
  'makes',
  'phone',
  'waterproof',
  'light',
  'cigarettes'],
 ['rt',
  'rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['ick', 'yo', 'autocorrect', 'ruse'],
 ['one',
  'iphone',
  'five',
  'speakers',
  'stopped',
  'working',
  'cool',
  'send',
  'iphone',
  'six',
  'forgive'],
 ['hope',
  'apple',
  'approves',
  'irelay',
  'social',
  'network',
  'mobile',
  'photo',
  'sharing',
  'app',
  'sxsw',
  'easier',
  'share',
  'people',
  'download'],
 ['still', 'cannot', 'merge', 'multiple', 'apple', 'id', 'fail'],
 ['apple',
  'open',
  'popup',
  'store',
  'friday',
  'six',
  'th',
  'congress',
  'sxsw',
  'via',
  'satesman',
  'com'],
 ['rt',
  'attending',
  'sxsw',
  'austin',
  'guide',
  'free',
  'download',
  'itunes',
  'lp'],
 ['new',
  'ubersocial',
  'iphone',
  'app',
  'store',
  'includes',
  'uberguide',
  'sxsw',
  'sponsored',
  'mashable'],
 ['spilled',
  'beans',
  'next',
  'platform',
  'flipboard',
  'iphone',
  'team',
  'started',
  'working',
  'sxflip',
  'sxsw',
  'sxswi',
  'gr',
  'eight'],
 ['could',
  'post',
  'twitter',
  'nasdaq',
  'twtr',
  'instagram',
  'nasdaq',
  'fb',
  'shutterfly',
  'nasdaq',
  'sfly',
  'shutitdown'],
 ['omg',
  'best',
  'conference',
  'time',
  'ever',
  'google',
  'sxsw',
  'four',
  'sqchat'],
 ['wabi',
  'sabi',
  'inspiration',
  'lab',
  'looking',
  'spanish',
  'speaking',
  'trend',
  'scout',
  'based',
  'austin',
  'texas',
  'sxsw'],
 ['rt', 'get', 'look', 'sxsw', 'rumored', 'apple', 'pop', 'store', 'austin'],
 ['rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['sent',
  'computer',
  'twice',
  'repairs',
  'last',
  'month',
  'time',
  'comes',
  'back',
  'new',
  'problem',
  'something',
  'right'],
 ['days',
  'later',
  'still',
  'line',
  'door',
  'sxsw',
  'apple',
  'store',
  'ipad',
  'two'],
 ['new',
  'post',
  'three',
  'iphone',
  'apps',
  'using',
  'south',
  'southwest',
  'interactive',
  'sxsw',
  'sxswi'],
 ['google',
  'incapable',
  'disruptive',
  'innovation',
  'acquired',
  'eighty',
  'nine',
  'startups',
  'last',
  'years',
  'leanstartup',
  'sxsw'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw',
  'googlebook',
  'twitgle'],
 ['hey',
  'heard',
  'sxsw',
  'come',
  'grille',
  'make',
  'comic',
  'iphone',
  'case',
  'say'],
 ['iphone', 'fucked', 'thanks', 'great', 'help', 'get', 'new', 'iphone'],
 ['aaron',
  'p',
  'apps',
  'feel',
  'like',
  'web',
  'much',
  'browser',
  'ipad',
  'neither',
  'web',
  'print',
  'newsapps',
  'sxsw'],
 ['going',
  'sxsw',
  'check',
  'new',
  'rhapsody',
  'echo',
  'nest',
  'app',
  'help',
  'figure',
  'shows',
  'see'],
 ['ipad',
  'design',
  'headaches',
  'interface',
  'metaphor',
  'looks',
  'like',
  'book',
  'make',
  'behave',
  'like',
  'book',
  'simple',
  'stuff',
  'often',
  'forgotten',
  'sxsw'],
 ['mayer',
  'people',
  'drive',
  'twelve',
  'bn',
  'miles',
  'year',
  'using',
  'google',
  'maps',
  'navigation',
  'whither',
  'sat',
  'nav',
  'sxsw'],
 ['google',
  'circles',
  'indeed',
  'going',
  'sxsw',
  'likely',
  'release',
  'google',
  'may'],
 ['rt',
  'sxsw',
  'apple',
  'comes',
  'w',
  'cool',
  'technology',
  'one',
  'ever',
  'heard',
  'go',
  'conferences'],
 ['ipad',
  'two',
  'popping',
  'everywhere',
  'sxsw',
  'glut',
  'ipads',
  'sale',
  'craigslist'],
 ['congrats',
  'chris',
  'rt',
  'sxsw',
  'interactive',
  'award',
  'music',
  'category',
  'wilderness',
  'downtown'],
 ['going', 'press', 'play', 'button', 'wait', 'fix', 'apps'],
 ['true', 'rt', 'bet', 'longest', 'ipad', 'lines', 'going', 'austin', 'sxsw'],
 ['updated', 'yosemite', 'two', 'machines', 'painfully', 'slow', 'thanks'],
 ['tech',
  'sxsw',
  'apple',
  'schools',
  'marketing',
  'experts',
  'thousands',
  'town',
  'demonstrate',
  'social',
  'technology'],
 ['pdanet', 'awesome', 'app', 'yet', 'android', 'sxsw', 'likes'],
 ['google', 'denies', 'rumors', 'launching', 'circles', 'sxsw'],
 ['scored',
  'mophie',
  'juice',
  'pack',
  'tradeshow',
  'sxsw',
  'double',
  'iphone',
  'battery'],
 ['rt',
  'booth',
  'three',
  'hundred',
  'thirteen',
  'still',
  'time',
  'power',
  'challenge',
  'ride',
  'bike',
  'get',
  'bottle',
  'enter',
  'win',
  'ipad',
  'sxsw',
  'thisiscrazyfun'],
 ['rt',
  'line',
  'popup',
  'apple',
  'store',
  'six',
  'th',
  'congress',
  'still',
  'block',
  'long',
  'sxsw',
  'fucking',
  'californians'],
 ['rt',
  'rt',
  'rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['social',
  'marketing',
  'experts',
  'sxsw',
  'everyone',
  'face',
  'facts',
  'admit',
  'apple',
  'showed',
  'everyone',
  'marketing',
  'done',
  'cnet'],
 ['rt',
  'sxsw',
  'awesomeness',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw',
  'ipad',
  'two',
  'launch'],
 ['giving',
  'away',
  'five',
  'dual',
  'compatible',
  'juice',
  'pack',
  'airs',
  'iphone',
  'four',
  'first',
  'come',
  'first',
  'serve',
  'front',
  'hall',
  'three',
  'winning',
  'sxsw'],
 ['apple',
  'making',
  'temp',
  'store',
  'sxsw',
  'two',
  'thousand',
  'eleven',
  'get',
  'ipad',
  'two'],
 ['win',
  'awesome',
  'ipad',
  'quibids',
  'custom',
  'case',
  'catch',
  'sxsw',
  'wearing',
  'openbeta',
  'vip',
  'badge'],
 ['okay',
  'really',
  'yay',
  'new',
  'android',
  'app',
  'eleven',
  'kthxbai',
  'sxsw'],
 ['mike', 'tyson', 'wants', 'iphone', 'knockout', 'sxsw', 'cnet', 'blogs'],
 ['registration',
  'android',
  'market',
  'approved',
  'lmndst',
  'sxsw',
  'startupbus'],
 ['connect',
  'rt',
  'google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'sxsw'],
 ['google',
  'going',
  'launch',
  'googlecircles',
  'social',
  'network',
  'sxsw',
  'socialmedia'],
 ['big',
  'line',
  'google',
  'bing',
  'session',
  'people',
  'line',
  'saying',
  'one',
  'ballrooms',
  'sxsw'],
 ['rt',
  'oh',
  'like',
  'cannot',
  'believe',
  'three',
  'boyfriends',
  'since',
  'first',
  'ipad',
  'sxsw'],
 ['line', 'people', 'dull', 'get', 'iphone', 'talk', 'person', 'next', 'sxsw'],
 ['apple',
  'open',
  'temporary',
  'store',
  'friday',
  'scarbrough',
  'building',
  'six',
  'th',
  'congress',
  'sxsw'],
 ['google',
  'launch',
  'major',
  'new',
  'social',
  'network',
  'called',
  'circles',
  'possibly',
  'today',
  'rt',
  'sxsw'],
 ['credit',
  'card',
  'companies',
  'know',
  'ninety',
  'eight',
  'accuracy',
  'two',
  'yrs',
  'going',
  'get',
  'divorced',
  'sxsw'],
 ['rt',
  'happy',
  'woman',
  'day',
  'make',
  'love',
  'fuss',
  'edchat',
  'musedchat',
  'sxsw',
  'sxswi',
  'classical',
  'newtwitter'],
 ['hard',
  'time',
  'tweeting',
  'using',
  'iphone',
  'sxsw',
  'using',
  'ipad',
  'much',
  'better',
  'hisxsw'],
 ['rt',
  'new',
  'ubersocial',
  'iphone',
  'app',
  'store',
  'includes',
  'uberguide',
  'sxsw',
  'sponsored',
  'mashable'],
 ['rt', 'ipad', 'two', 'unboxing', 'outside', 'sxsw', 'apple', 'store'],
 ['rt',
  'confirmed',
  'apple',
  'store',
  'two',
  'week',
  'popup',
  'austin',
  'sxsw',
  'picture'],
 ['hate',
  'ipad',
  'fleets',
  'nerds',
  'armed',
  'ipads',
  'navigating',
  'crowds',
  'far',
  'cool',
  'ever',
  'seen',
  'sxsw'],
 ['nu',
  'user',
  'rt',
  'new',
  'ubersocial',
  'iphone',
  'app',
  'store',
  'includes',
  'uberguide',
  'sxsw',
  'sponsored',
  'mashable'],
 ['rt',
  'toptweets',
  'rt',
  'rumor',
  'apple',
  'opening',
  'temporary',
  'store',
  'downtown',
  'austin',
  'sxsw'],
 ...]
~~~

In [89]:
```python
#Adding all the tokens to a variable
data = X_train_tokens
~~~

In [90]:
```python
#Create Set of Unique Tokens
total_vocabulary = set(word for tweet in data for word in tweet)
```

In [91]:
```python
len(total_vocabulary)
```

Out[91]:
```
9065
```

In [95]:
```python
#Createa dictionay that takes the glove embeddings and attatches them to the words in the dataset
embedding_vector = {}
with open('/Users/seanyboy/Documents/Flatiron/Phase_4/Twitter_Sentiment_Project/Data/glove.6B.50d.txt', 'rb') a
    for line in f:
        parts = line.split()
        word = parts[0].decode('utf-8')
        if word in total_vocabulary:
            vector = np.array(parts[1:], dtype=np.float32)
            embedding_vector[word] = vector
```

In [96]:
```python
# Creating Sequence Tokens
token = Tokenizer()
token.fit_on_texts(X_train)
seq = token.texts_to_sequences(X_train)
```

In [97]:
```python
X_train_tokens[0:4]
```

Out[97]:
```
[['sxsw',
  'mistakes',
  'made',
  'building',
  'netflix',
  'iphone',
  'plus',
  'see',
  'source',
  'code'],
 ['great',
  'visualisation',
  'ghost',
  'movement',
  'logic',
  'pacman',
  'google',
  'doodles',
  'session',
  'sxsw',
  'details'],
 ['iphone',
  'worries',
  'drop',
  'one',
  'venues',
  'talk',
  'concierge',
  'take',
  'care',
  'sxsw',
  'sxswi'],
 ['heard',
  'downtown',
  'location',
  'sold',
  'one',
  'merchandise',
  'last',
  'night',
  'sxsw',
  'apple',
  'ipad',
  'two']]
```

In [98]:
```python
seq[0:4]
```
~~~

Out[98]:
```
[[1, 951, 264, 451, 952, 7, 17, 565, 93, 3, 99, 156, 824, 566],
 [100,
  5195,
  16,
  2,
  3550,
  1716,
  1972,
  13,
  3551,
  170,
  2,
  11,
  825,
  201,
  1,
  86,
  339,
  79],
 [71,
  17,
  71,
  3552,
  953,
  181,
  31,
  16,
  97,
  3553,
  12,
  182,
  3,
  8,
  3554,
  48,
  37,
  279,
  1209,
  16,
  19,
  1,
  70],
 [15, 222, 2, 101, 153, 423, 31, 378, 13, 5196, 154, 258, 1, 10, 6, 14]]
```

In [99]:
```
    max([len(x)for x in seq])
```

Out[99]:
```
48
```

In [100…
```
train_seq = pad_sequences(seq,maxlen=40,padding='pre')
```

The lists of tokens have been changed to numpy arrays that are padded with

In [101…
```
train_seq[0:4]
```

Out[101]:
```
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,    1,  951,  264,  451,  952,    7,   17,
         565,   93,    3,   99,  156,  824,  566],
       [   0,    0,    0,    0,    0,    0,    0,    0,    0,    0,    0,
           0,    0,    0,    0,    0,    0,    0,    0,    0,    0,    0,
         100, 5195,   16,    2, 3550, 1716, 1972,   13, 3551,  170,    2,
          11,  825,  201,    1,   86,  339,   79],
       [   0,    0,    0,    0,    0,    0,    0,    0,    0,    0,    0,
           0,    0,    0,    0,    0,    0,   71,   17,   71, 3552,  953,
         181,   31,   16,   97, 3553,   12,  182,    3,    8, 3554,   48,
          37,  279, 1209,   16,   19,    1,   70],
       [   0,    0,    0,    0,    0,    0,    0,    0,    0,    0,    0,
           0,    0,    0,    0,    0,    0,    0,    0,    0,    0,    0,
           0,    0,   15,  222,    2,  101,  153,  423,   31,  378,   13,
        5196,  154,  258,    1,   10,    6,   14]], dtype=int32)
```

In [102…
```
train_seq.shape
```

Out[102]:
```
(8124, 40)
```

In [103…
```
vocab_size = len(token.word_index)+1
```

In [104…
```
embedding_matrix = np.zeros((vocab_size,50))
for word,i in tqdm(token.word_index.items()):
    embedding_value = embedding_vector.get(word)
    if embedding_value is not None:
        embedding_matrix[i] = embedding_value
```

```
100%|██████████████████████████████| 9486/9486 [00:00<00:00, 318674.65it/s]
```

In [105…
```
embedding_matrix.shape
```

Out[105]:
```
(9487, 50)
```

Baseline LSTM Model

Class Weights

This is an imbalanced dataset so I will compute the class weights with sklearn's class weight utility.

In [106…
```
class_weights = class_weight.compute_class_weight(class_weight='balanced',classes=[0,1],y=y_train)
```

In [107…
```
class_weight=dict(zip([0,1],class_weights))
```

Metrics For Modeling

These are variety of metrics to choose from for early stopping during the training of the neural networks.

In [108…
```
metrics = [
    keras.metrics.FalseNegatives(name="fn"),
    keras.metrics.FalsePositives(name="fp"),
    keras.metrics.TrueNegatives(name="tn"),
    keras.metrics.TruePositives(name="tp"),
    keras.metrics.Precision(name="precision"),
    keras.metrics.Recall(name="recall"),
    keras.metrics.AUC(name='AUC'),
    keras.metrics.PrecisionAtRecall(name='PatR',recall=0.78)
]
```

```
2022-09-16 14:19:07.884739: I tensorflow/core/platform/cpu_feature_guard.cc:193] This TensorFlow binary is opti
mized with oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-cri
tical operations:  AVX2 FMA
To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
```

Early Stopping

I will use early stopping in order to hopefully find the best model and prevent overfitting. I will first attempt to use recall as the guide for the early topping, leaving

In [109…
```
es = EarlyStopping(monitor='val_recall', mode='max', verbose=1,patience=10,restore_best_weights=True)
```

In [110…
```
model=Sequential()
model.add(Embedding(vocab_size,50,weights=[embedding_matrix],input_length=40,trainable=False))
model.add(layers.LSTM(units=64))
model.add(layers.Dropout(0.2))
model.add(layers.Dense(32))
model.add(layers.Dense(1, activation="sigmoid"))
model.compile(optimizer="adam", loss="binary_crossentropy", metrics=metrics)
model.summary()
```

```
Model: "sequential"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 embedding (Embedding)       (None, 40, 50)            474350

 lstm (LSTM)                 (None, 64)                29440

 dropout (Dropout)           (None, 64)                0

 dense (Dense)               (None, 32)                2080

 dense_1 (Dense)             (None, 1)                 33

=================================================================
Total params: 505,903
Trainable params: 31,553
Non-trainable params: 474,350
_________________________________________________________________
```

In [111…
```
history = model.fit(train_seq,y_train,epochs = 50,batch_size=32,validation_split=0.2,class_weight=class_weight,
```

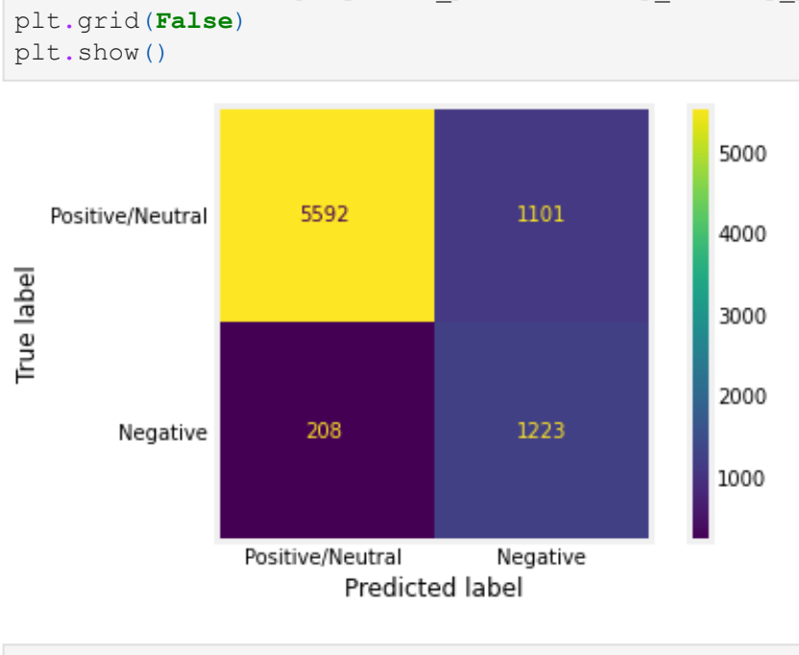
```
Epoch 1/50
204/204 [==============================] - 13s 37ms/step - loss: 0.4169 - fn: 271.0000 - fp: 726.0000 - tn: 463
3.0000 - tp: 869.0000 - precision: 0.5448 - recall: 0.7623 - AUC: 0.8838 - PatR: 0.5083 - val_loss: 0.3521 - va
l_fn: 76.0000 - val_fp: 173.0000 - val_tn: 1161.0000 - val_tp: 215.0000 - val_precision: 0.5541 - val_recall:
0.7388 - val_AUC: 0.8782 - val_PatR: 0.4820
Epoch 2/50
204/204 [==============================] - 6s 31ms/step - loss: 0.3310 - fn: 265.0000 - fp: 400.0000 - tn: 495
9.0000 - tp: 875.0000 - precision: 0.6863 - recall: 0.7675 - AUC: 0.9188 - PatR: 0.6422 - val_loss: 0.4022 - va
l_fn: 65.0000 - val_fp: 220.0000 - val_tn: 1114.0000 - val_tp: 226.0000 - val_precision: 0.5067 - val_recall:
0.7766 - val_AUC: 0.8859 - val_PatR: 0.4967
Epoch 3/50
204/204 [==============================] - 7s 36ms/step - loss: 0.3106 - fn: 248.0000 - fp: 361.0000 - tn: 499
8.0000 - tp: 892.0000 - precision: 0.7119 - recall: 0.7825 - AUC: 0.9289 - PatR: 0.7189 - val_loss: 0.3068 - va
l_fn: 77.0000 - val_fp: 114.0000 - val_tn: 1220.0000 - val_tp: 214.0000 - val_precision: 0.6524 - val_recall:
0.7354 - val_AUC: 0.8966 - val_PatR: 0.5866
Epoch 4/50
204/204 [==============================] - 8s 38ms/step - loss: 0.2912 - fn: 228.0000 - fp: 433.0000 - tn: 492
6.0000 - tp: 912.0000 - precision: 0.6781 - recall: 0.8000 - AUC: 0.9397 - PatR: 0.7448 - val_loss: 0.2583 - va
l_fn: 90.0000 - val_fp: 48.0000 - val_tn: 1286.0000 - val_tp: 201.0000 - val_precision: 0.8072 - val_recall: 0.
6907 - val_AUC: 0.8991 - val_PatR: 0.5602
Epoch 5/50
204/204 [==============================] - 7s 36ms/step - loss: 0.2647 - fn: 196.0000 - fp: 410.0000 - tn: 494
9.0000 - tp: 944.0000 - precision: 0.6972 - recall: 0.8281 - AUC: 0.9522 - PatR: 0.7845 - val_loss: 0.2403 - va
l_fn: 98.0000 - val_fp: 28.0000 - val_tn: 1306.0000 - val_tp: 193.0000 - val_precision: 0.8733 - val_recall: 0.
6632 - val_AUC: 0.8977 - val_PatR: 0.5363
Epoch 6/50
204/204 [==============================] - 7s 34ms/step - loss: 0.2581 - fn: 186.0000 - fp: 406.0000 - tn: 495
3.0000 - tp: 954.0000 - precision: 0.7015 - recall: 0.8368 - AUC: 0.9549 - PatR: 0.8226 - val_loss: 0.3024 - va
l_fn: 73.0000 - val_fp: 127.0000 - val_tn: 1207.0000 - val_tp: 218.0000 - val_precision: 0.6319 - val_recall:
0.7491 - val_AUC: 0.9015 - val_PatR: 0.6005
Epoch 7/50
204/204 [==============================] - 7s 34ms/step - loss: 0.2382 - fn: 161.0000 - fp: 437.0000 - tn: 492
2.0000 - tp: 979.0000 - precision: 0.6914 - recall: 0.8588 - AUC: 0.9623 - PatR: 0.8558 - val_loss: 0.2905 - va
l_fn: 71.0000 - val_fp: 103.0000 - val_tn: 1231.0000 - val_tp: 220.0000 - val_precision: 0.6811 - val_recall:
0.7560 - val_AUC: 0.9035 - val_PatR: 0.5927
Epoch 8/50
204/204 [==============================] - 6s 32ms/step - loss: 0.2297 - fn: 158.0000 - fp: 423.0000 - tn: 493
6.0000 - tp: 982.0000 - precision: 0.6989 - recall: 0.8614 - AUC: 0.9650 - PatR: 0.8725 - val_loss: 0.2903 - va
l_fn: 74.0000 - val_fp: 111.0000 - val_tn: 1223.0000 - val_tp: 217.0000 - val_precision: 0.6616 - val_recall:
0.7457 - val_AUC: 0.9002 - val_PatR: 0.5896
Epoch 9/50
204/204 [==============================] - 7s 32ms/step - loss: 0.2141 - fn: 129.0000 - fp: 397.0000 - tn: 496
2.0000 - tp: 1011.0000 - precision: 0.7180 - recall: 0.8868 - AUC: 0.9702 - PatR: 0.8865 - val_loss: 0.2801 - v
al_fn: 82.0000 - val_fp: 75.0000 - val_tn: 1259.0000 - val_tp: 209.0000 - val_precision: 0.7359 - val_recall:
0.7182 - val_AUC: 0.8983 - val_PatR: 0.5806
Epoch 10/50
204/204 [==============================] - 7s 35ms/step - loss: 0.2018 - fn: 133.0000 - fp: 403.0000 - tn: 495
6.0000 - tp: 1007.0000 - precision: 0.7142 - recall: 0.8833 - AUC: 0.9740 - PatR: 0.9073 - val_loss: 0.2738 - v
al_fn: 79.0000 - val_fp: 79.0000 - val_tn: 1255.0000 - val_tp: 212.0000 - val_precision: 0.7285 - val_recall:
0.7285 - val_AUC: 0.9023 - val_PatR: 0.6102
Epoch 11/50
204/204 [==============================] - 6s 31ms/step - loss: 0.1841 - fn: 102.0000 - fp: 369.0000 - tn: 499
0.0000 - tp: 1038.0000 - precision: 0.7377 - recall: 0.9105 - AUC: 0.9786 - PatR: 0.9176 - val_loss: 0.2501 - v
al_fn: 70.0000 - val_fp: 88.0000 - val_tn: 1246.0000 - val_tp: 221.0000 - val_precision: 0.7152 - val_recall:
0.7595 - val_AUC: 0.9120 - val_PatR: 0.6716
Epoch 12/50
203/204 [============================>.] - ETA: 0s - loss: 0.1653 - fn: 95.0000 - fp: 331.0000 - tn: 5025.0000
- tp: 1045.0000 - precision: 0.7594 - recall: 0.9167 - AUC: 0.9829 - PatR: 0.9580Restoring model weights from t
he end of the best epoch: 2.
204/204 [==============================] - 6s 32ms/step - loss: 0.1654 - fn: 95.0000 - fp: 332.0000 - tn: 5027.
0000 - tp: 1045.0000 - precision: 0.7589 - recall: 0.9167 - AUC: 0.9829 - PatR: 0.9580 - val_loss: 0.2909 - val
_fn: 73.0000 - val_fp: 85.0000 - val_tn: 1249.0000 - val_tp: 218.0000 - val_precision: 0.7195 - val_recall: 0.7
491 - val_AUC: 0.9020 - val_PatR: 0.6504
Epoch 12: early stopping
```

First Evaluation - Training

In [112…
```
predict = model.predict(train_seq)
y_pred = [1 * (x[0]>=0.5) for x in predict]
```

```
254/254 [==============================] - 3s 10ms/step
```

In [113…
```
plt.style.use('fivethirtyeight')
ConfusionMatrixDisplay.from_predictions(y_train,y_pred,display_labels=['Positive/Neutral','Negative'])
plt.grid(False)
plt.show()
```



In [115…
```
print(fn.classification_report(y_train,y_pred))
```

```
              precision    recall  f1-score   support

           0       0.96      0.84      0.90      6693
           1       0.53      0.85      0.65      1431

    accuracy                           0.84      8124
   macro avg       0.75      0.85      0.77      8124
weighted avg       0.89      0.84      0.85      8124
```

Compared to the conventional models, this model did a great job on recall for the negative class that is sought after, but the precision score is troubling, another model iteration needs to address this.

First Evaluation Validation

Transforming with Tokenizer

In [116…
```
#Tokenizing on the validation Set
X_val_tokens = token.texts_to_sequences(X_val)
#Creating the validation sequences
val_seq = pad_sequences(X_val_tokens,maxlen=40)
```

In [117…
```
#Predicting on validation Set
val_pred = model.predict(val_seq)
y_val_pred = [1 * (x[0]>=0.5) for x in val_pred]
```

```
32/32 [==============================] - 0s 13ms/step
```

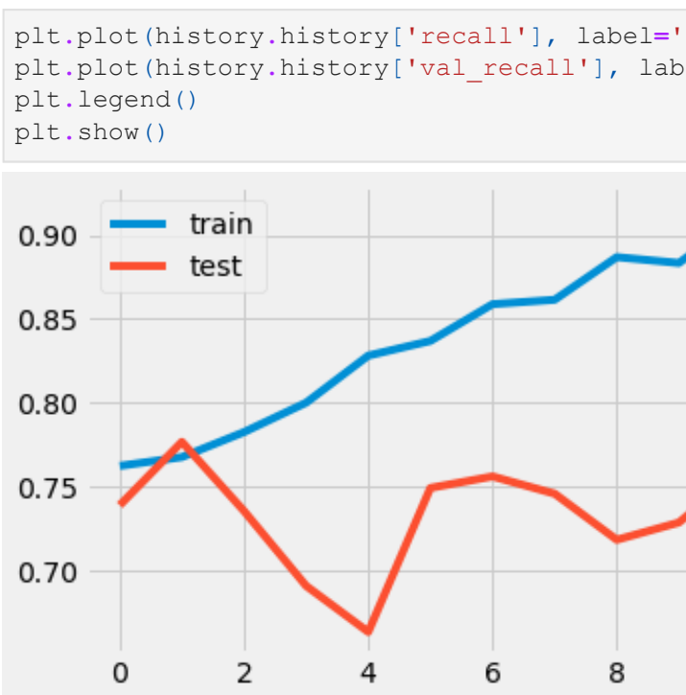
In [118…
```
print(fn.classification_report(y_val,y_val_pred))
```

```
              precision    recall  f1-score   support

           0       0.95      0.84      0.89       836
           1       0.52      0.82      0.63       179

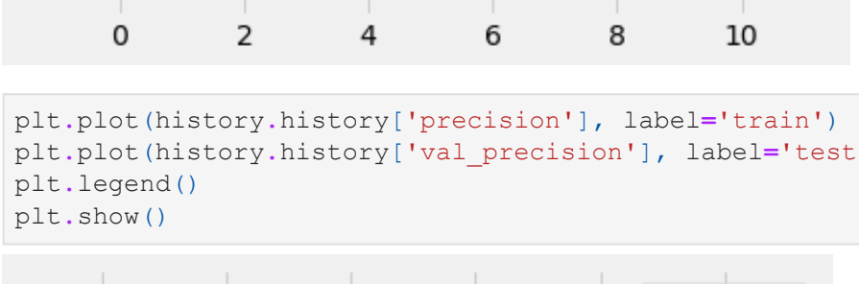
    accuracy                           0.83      1015
   macro avg       0.74      0.83      0.76      1015
weighted avg       0.88      0.83      0.85      1015
```

In [119…
```
plt.style.use('fivethirtyeight')
ConfusionMatrixDisplay.from_predictions(y_val,y_val_pred)
plt.grid(False)
plt.show()
```

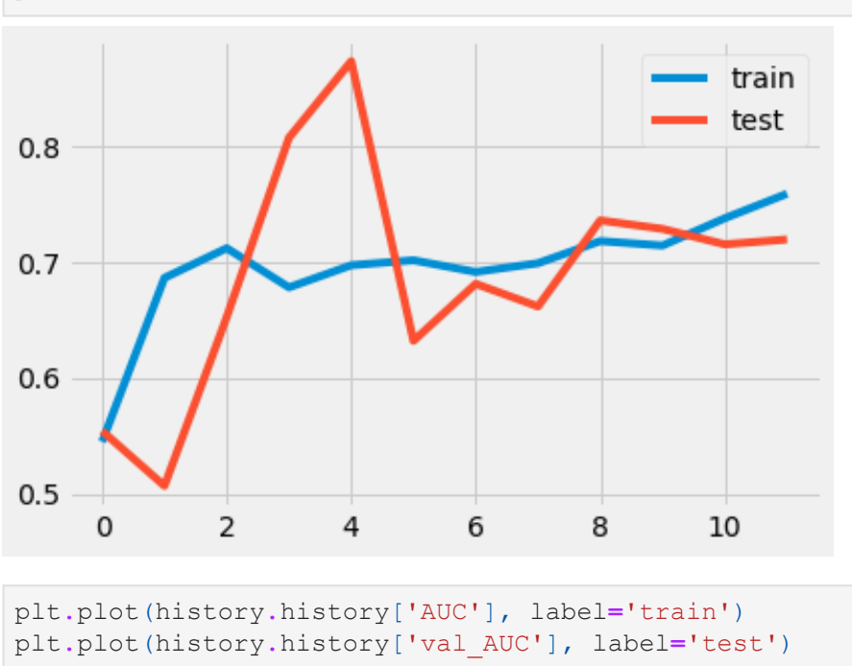


This is a mixed bag of evaluation. The neural network does appear to be slightly overfitting, but a bigger problem is the struggle with precision for the model. The model is struggling to separate positive from negative, the cases of very negative may be very clear to the model, but it's performance could indeed be better.

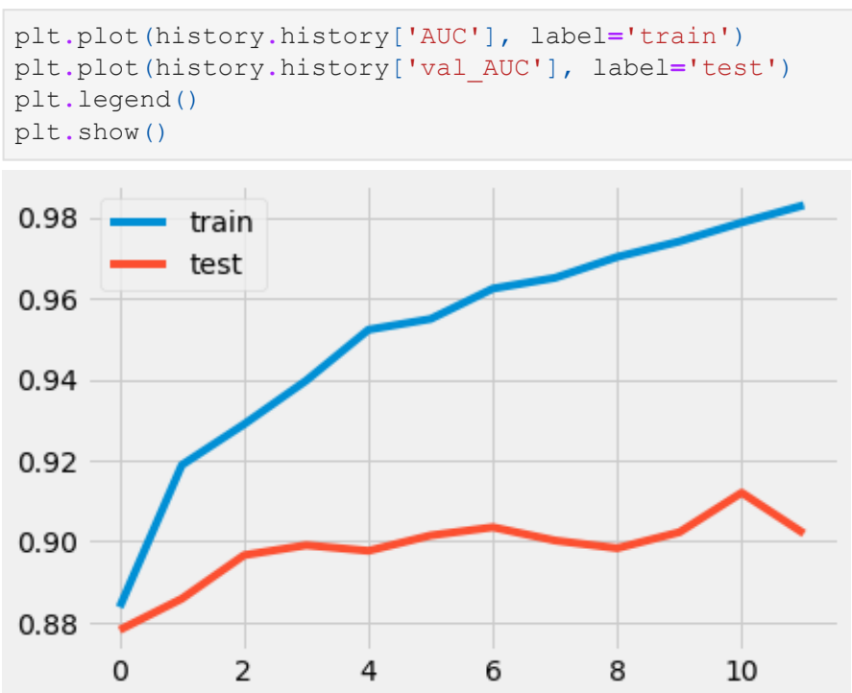
In [120…
```
plt.plot(history.history['recall'], label='train')
plt.plot(history.history['val_recall'], label='test')
plt.legend()
plt.show()
```



In [121…
```
plt.plot(history.history['precision'], label='train')
plt.plot(history.history['val_precision'], label='test')
plt.legend()
plt.show()
```



In [122…
```
plt.plot(history.history['AUC'], label='train')
plt.plot(history.history['val_AUC'], label='test')
plt.legend()
plt.show()
```



Frustratingly the above charts reveal the difficulty with training epochs, as the 4th epoch was the highest validation score of recall, but the lowest for precision. I need to find a way to have the scores match better.

Second LSTM Model

For this second model I am using the an fbeta score function, using a beta of 1.75, leaning more towards recall than precision as the last LSTM model showed a unacceptably low precision score. The fbeta score will be the determining metric for the early stopping on this model iteration.

In [123…
```
from keras import backend as K
THRESHOLD = 0.5

def fbeta(y_true, y_pred, beta = 1.75, threshold_shift=0.5-THRESHOLD):
    # just in case
    y_pred = K.clip(y_pred, 0, 1)

    # shifting the prediction threshold from .5 if needed
    y_pred_bin = K.round(y_pred + threshold_shift)

    tp = K.sum(K.round(y_true * y_pred_bin)) + K.epsilon()
    fp = K.sum(K.round(K.clip(y_pred_bin - y_true, 0, 1)))
    fn = K.sum(K.round(K.clip(y_true - y_pred, 0, 1)))

    precision = tp / (tp + fp)
    recall = tp / (tp + fn)

    beta_squared = beta ** 2
    return (beta_squared + 1) * (precision * recall) / (beta_squared * precision + recall)
```

In [124…
```
model=Sequential()
model.add(Embedding(vocab_size,50,weights=[embedding_matrix],input_length=40,trainable=False))
model.add(Bidirectional(LSTM(units=64)))
model.add(Dense(64, activation='relu'))
model.add(layers.Dropout(0.2))
model.add(layers.Dense(1, activation="sigmoid"))
model.compile(optimizer="adam", loss="binary_crossentropy", metrics=fbeta,run_eagerly=True)
model.summary()
```

```
Model: "sequential_1"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 embedding_1 (Embedding)     (None, 40, 50)            474350

 bidirectional (Bidirectiona  (None, 128)              58880
 l)

 dense_2 (Dense)             (None, 64)                8256

 dropout_1 (Dropout)         (None, 64)                0

 dense_3 (Dense)             (None, 1)                 65

=================================================================
Total params: 541,551
Trainable params: 67,201
Non-trainable params: 474,350
_________________________________________________________________
```

In [126…
```
es = EarlyStopping(monitor='val_fbeta', mode='max', verbose=1,patience=5,restore_best_weights=True)
```

In [127…
```
history = model.fit(train_seq,y_train,epochs = 100,batch_size=32,validation_split=0.2,class_weight=class_weight
```

```
Epoch 1/100
204/204 [==============================] - 55s 268ms/step - loss: 0.4180 - fbeta: 0.6739 - val_loss: 0.4174 - v
al_fbeta: 0.6714
Epoch 2/100
204/204 [==============================] - 54s 265ms/step - loss: 0.3246 - fbeta: 0.7247 - val_loss: 0.2535 - v
al_fbeta: 0.6934
Epoch 3/100
204/204 [==============================] - 54s 266ms/step - loss: 0.3021 - fbeta: 0.7413 - val_loss: 0.3244 - v
al_fbeta: 0.7057
Epoch 4/100
204/204 [==============================] - 54s 262ms/step - loss: 0.2856 - fbeta: 0.7443 - val_loss: 0.2596 - v
al_fbeta: 0.7112
Epoch 5/100
204/204 [==============================] - 54s 265ms/step - loss: 0.2625 - fbeta: 0.7761 - val_loss: 0.2828 - v
al_fbeta: 0.7103
Epoch 6/100
204/204 [==============================] - 54s 264ms/step - loss: 0.2497 - fbeta: 0.7851 - val_loss: 0.3034 - v
al_fbeta: 0.7175
Epoch 7/100
204/204 [==============================] - 59s 291ms/step - loss: 0.2316 - fbeta: 0.8009 - val_loss: 0.2606 - v
al_fbeta: 0.7337
Epoch 8/100
204/204 [==============================] - 56s 273ms/step - loss: 0.2211 - fbeta: 0.8104 - val_loss: 0.2371 - v
al_fbeta: 0.7241
Epoch 9/100
204/204 [==============================] - 55s 270ms/step - loss: 0.2091 - fbeta: 0.8134 - val_loss: 0.2543 - v
al_fbeta: 0.7292
Epoch 10/100
204/204 [==============================] - 56s 272ms/step - loss: 0.1870 - fbeta: 0.8264 - val_loss: 0.2679 - v
al_fbeta: 0.7474
Epoch 11/100
204/204 [==============================] - 54s 266ms/step - loss: 0.1733 - fbeta: 0.8366 - val_loss: 0.3479 - v
al_fbeta: 0.7272
Epoch 12/100
204/204 [==============================] - 281s 1s/step - loss: 0.1598 - fbeta: 0.8502 - val_loss: 0.2692 - val
_fbeta: 0.7585
Epoch 13/100
204/204 [==============================] - 70s 344ms/step - loss: 0.1606 - fbeta: 0.8578 - val_loss: 0.3093 - v
al_fbeta: 0.7591
Epoch 14/100
204/204 [==============================] - 69s 339ms/step - loss: 0.1344 - fbeta: 0.8688 - val_loss: 0.2911 - v
al_fbeta: 0.7244
Epoch 15/100
204/204 [==============================] - 62s 307ms/step - loss: 0.1210 - fbeta: 0.8886 - val_loss: 0.3034 - v
al_fbeta: 0.7740
Epoch 16/100
204/204 [==============================] - 59s 289ms/step - loss: 0.1020 - fbeta: 0.9128 - val_loss: 0.3025 - v
al_fbeta: 0.7731
Epoch 17/100
204/204 [==============================] - 59s 291ms/step - loss: 0.0910 - fbeta: 0.9125 - val_loss: 0.3240 - v
al_fbeta: 0.7727
Epoch 18/100
204/204 [==============================] - 68s 333ms/step - loss: 0.0732 - fbeta: 0.9311 - val_loss: 0.3725 - v
al_fbeta: 0.7630
Epoch 19/100
204/204 [==============================] - 58s 286ms/step - loss: 0.0747 - fbeta: 0.9302 - val_loss: 0.3410 - v
al_fbeta: 0.7413
Epoch 20/100
204/204 [==============================] - ETA: 0s - loss: 0.0619 - fbeta: 0.9441Restoring model weights from t
he end of the best epoch: 15.
204/204 [==============================] - 53s 259ms/step - loss: 0.0619 - fbeta: 0.9441 - val_loss: 0.3800 - v
al_fbeta: 0.7508
Epoch 20: early stopping
```

In [145…
```
predict = model.predict(train_seq)
y_pred = [1 * (x[0]>=0.5) for x in predict]
```

```
254/254 [==============================] - 77s 302ms/step
```

In [129…
```
print(fn.classification_report(y_train,y_pred))
```

```
              precision    recall  f1-score   support

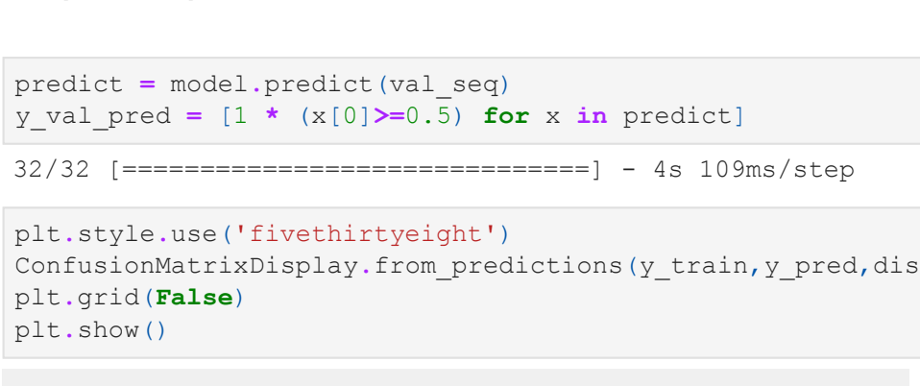
           0       0.98      0.97      0.98      6693
           1       0.86      0.92      0.89      1431

    accuracy                           0.96      8124
   macro avg       0.92      0.94      0.93      8124
weighted avg       0.96      0.96      0.96      8124
```

In [130…
```
predict = model.predict(val_seq)
y_val_pred = [1 * (x[0]>=0.5) for x in predict]
```

```
32/32 [==============================] - 4s 109ms/step
```

In [131…
```
plt.style.use('fivethirtyeight')
ConfusionMatrixDisplay.from_predictions(y_train,y_pred,display_labels=['Positive/Neutral','Negative'])
plt.grid(False)
plt.show()
```



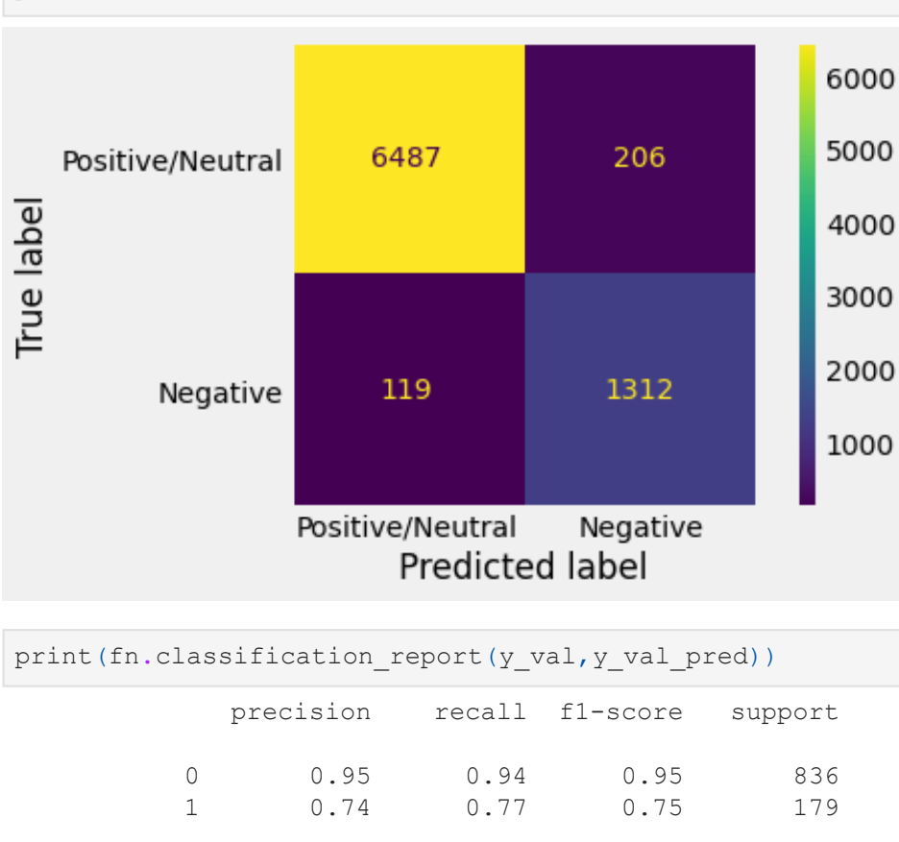
In [132…
```
print(fn.classification_report(y_val,y_val_pred))
```

```
              precision    recall  f1-score   support

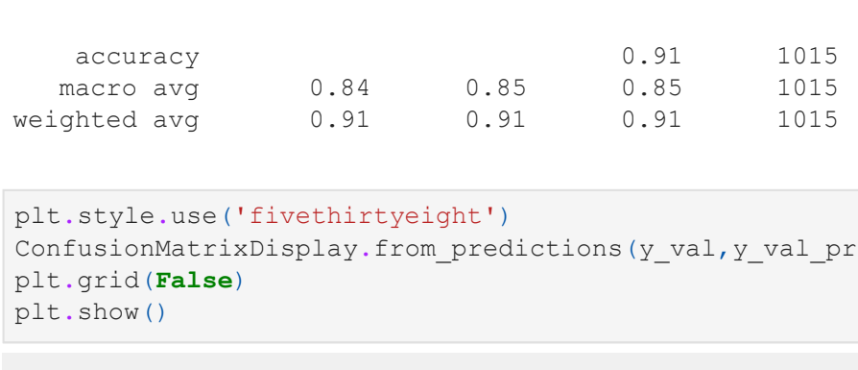
           0       0.95      0.94      0.95       836
           1       0.74      0.77      0.75       179

    accuracy                           0.91      1015
   macro avg       0.84      0.85      0.85      1015
weighted avg       0.91      0.91      0.91      1015
```

In [133…
```
plt.style.use('fivethirtyeight')
ConfusionMatrixDisplay.from_predictions(y_val,y_val_pred,display_labels=['Positive/Neutral','Negative'])
plt.grid(False)
plt.show()
```



In [134…
```
plt.plot(history.history['fbeta'], label='train')
plt.plot(history.history['val_fbeta'], label='test')
plt.legend()
plt.show()
```



Third Model Iteration

For this third iteration I have added another LSTM layer. There is a 10% dropout. I am allowing a 10 of patience for the early stopping this time and increasing the epochs to 200, yes it's a lot of epochs, but the early stopping will prevent extensive overfitting.

In [135…
```
model=Sequential()
model.add(Embedding(vocab_size,50,weights=[embedding_matrix],input_length=40,trainable=False))
model.add(Bidirectional(LSTM(128,return_sequences=True,)))
model.add(Dense(256, activation='relu'))
model.add(Bidirectional(LSTM(64)))
model.add(layers.Dropout(0.1))
model.add(layers.Dense(64, activation='relu'))
model.add(layers.Dense(1, activation="sigmoid"))
model.compile(optimizer="adam", loss="binary_crossentropy", metrics=fbeta,run_eagerly=True)
model.summary()
```

```
Model: "sequential_2"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 embedding_2 (Embedding)     (None, 40, 50)            474350

 bidirectional_1 (Bidirectio  (None, 40, 256)          183296
 nal)

 dense_4 (Dense)             (None, 40, 256)           65792

 bidirectional_2 (Bidirectio  (None, 128)              164352
 nal)

 dropout_2 (Dropout)         (None, 128)               0

 dense_5 (Dense)             (None, 64)                8256

 dense_6 (Dense)             (None, 1)                 65

=================================================================
Total params: 896,111
Trainable params: 421,761
Non-trainable params: 474,350
_________________________________________________________________
```

In [136…
```
es = EarlyStopping(monitor='val_fbeta', mode='max', verbose=1,patience=10,restore_best_weights=True)
```

In [137…
```
history = model.fit(train_seq,y_train,epochs = 200,batch_size=32,validation_split=0.2,class_weight=class_weight
```

```
Epoch 1/200
204/204 [==============================] - 196s 961ms/step - loss: 0.3876 - fbeta: 0.6904 - val_loss: 0.3325 -
val_fbeta: 0.7145
Epoch 2/200
204/204 [==============================] - 193s 948ms/step - loss: 0.3363 - fbeta: 0.7313 - val_loss: 0.2905 -
val_fbeta: 0.7007
Epoch 3/200
204/204 [==============================] - 206s 1s/step - loss: 0.2974 - fbeta: 0.7273 - val_loss: 0.2799 - val
_fbeta: 0.7134
Epoch 4/200
204/204 [==============================] - 191s 936ms/step - loss: 0.2960 - fbeta: 0.7413 - val_loss: 0.3355 -
val_fbeta: 0.6863
Epoch 5/200
204/204 [==============================] - 221s 1s/step - loss: 0.2686 - fbeta: 0.7634 - val_loss: 0.2653 - val
_fbeta: 0.7099
Epoch 6/200
204/204 [==============================] - 202s 985ms/step - loss: 0.2553 - fbeta: 0.7755 - val_loss: 0.2851 -
val_fbeta: 0.7247
Epoch 7/200
204/204 [==============================] - 193s 946ms/step - loss: 0.2487 - fbeta: 0.7917 - val_loss: 0.2765 -
val_fbeta: 0.7301
Epoch 8/200
204/204 [==============================] - 163s 801ms/step - loss: 0.2159 - fbeta: 0.8114 - val_loss: 0.2676 -
val_fbeta: 0.7435
Epoch 9/200
204/204 [==============================] - 182s 891ms/step - loss: 0.2002 - fbeta: 0.8194 - val_loss: 0.2347 -
val_fbeta: 0.7479
Epoch 10/200
204/204 [==============================] - 187s 918ms/step - loss: 0.1825 - fbeta: 0.8429 - val_loss: 0.2554 -
val_fbeta: 0.7542
Epoch 11/200
204/204 [==============================] - 166s 812ms/step - loss: 0.1544 - fbeta: 0.8687 - val_loss: 0.2536 -
val_fbeta: 0.7518
Epoch 12/200
204/204 [==============================] - 156s 766ms/step - loss: 0.1392 - fbeta: 0.8824 - val_loss: 0.3368 -
val_fbeta: 0.7145
Epoch 13/200
204/204 [==============================] - 160s 787ms/step - loss: 0.1311 - fbeta: 0.8872 - val_loss: 0.2893 -
val_fbeta: 0.7711
Epoch 14/200
204/204 [==============================] - 172s 843ms/step - loss: 0.1072 - fbeta: 0.9053 - val_loss: 0.3109 -
val_fbeta: 0.7460
Epoch 15/200
204/204 [==============================] - 212s 1s/step - loss: 0.0963 - fbeta: 0.9199 - val_loss: 0.3145 - val
_fbeta: 0.7529
Epoch 16/200
204/204 [==============================] - 186s 910ms/step - loss: 0.0809 - fbeta: 0.9274 - val_loss: 0.3425 -
val_fbeta: 0.7542
Epoch 17/200
204/204 [==============================] - 189s 926ms/step - loss: 0.0879 - fbeta: 0.9273 - val_loss: 0.4036 -
val_fbeta: 0.7232
Epoch 18/200
204/204 [==============================] - 165s 807ms/step - loss: 0.0669 - fbeta: 0.9404 - val_loss: 0.3705 -
val_fbeta: 0.7641
Epoch 19/200
204/204 [==============================] - 146s 716ms/step - loss: 0.0478 - fbeta: 0.9626 - val_loss: 0.3556 -
val_fbeta: 0.7672
Epoch 20/200
204/204 [==============================] - 144s 704ms/step - loss: 0.0499 - fbeta: 0.9633 - val_loss: 0.4044 -
val_fbeta: 0.7552
Epoch 21/200
204/204 [==============================] - 146s 717ms/step - loss: 0.0517 - fbeta: 0.9584 - val_loss: 0.3748 -
val_fbeta: 0.7535
Epoch 22/200
204/204 [==============================] - 144s 708ms/step - loss: 0.0340 - fbeta: 0.9644 - val_loss: 0.4294 -
val_fbeta: 0.7658
Epoch 23/200
204/204 [==============================] - ETA: 0s - loss: 0.0360 - fbeta: 0.9672Restoring model weights from t
he end of the best epoch: 13.
204/204 [==============================] - 964s 5s/step - loss: 0.0360 - fbeta: 0.9672 - val_loss: 0.5336 - val
_fbeta: 0.7446
Epoch 23: early stopping
```

In [139…
```
history.history.keys()
```

Out[139]:
```
dict_keys(['loss', 'fbeta', 'val_loss', 'val_fbeta'])
```

In [140…
```
predict = model.predict(val_seq)
y_val_pred = [1 * (x[0]>=0.5) for x in predict]
```

```
32/32 [==============================] - 9s 287ms/step
```

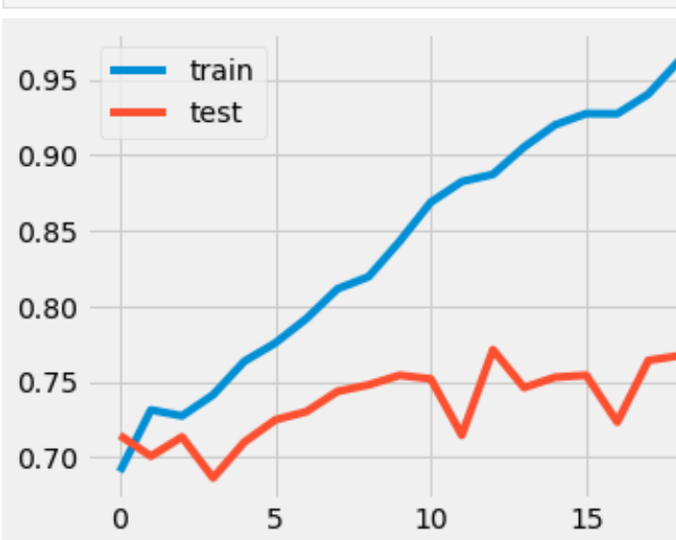
In [141…
```
print(fn.classification_report(y_val,y_val_pred))
```

```
              precision    recall  f1-score   support

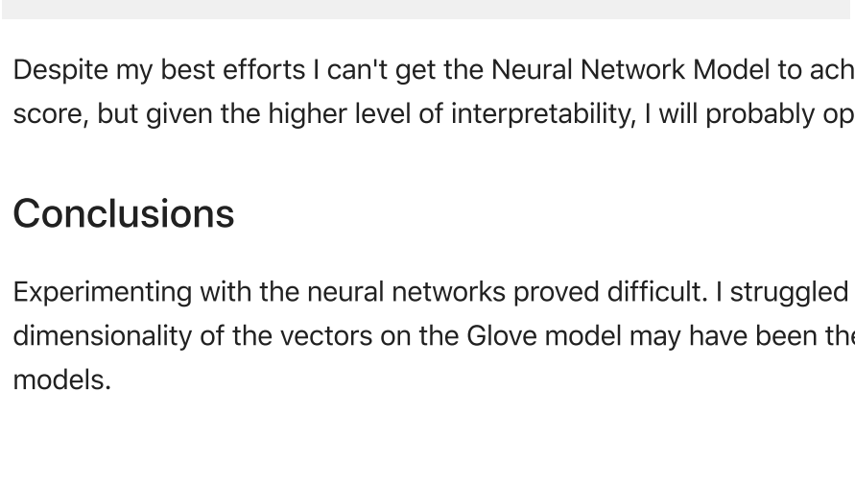
           0       0.95      0.95      0.95       836
           1       0.75      0.75      0.75       179

    accuracy                           0.91      1015
   macro avg       0.85      0.85      0.85      1015
weighted avg       0.91      0.91      0.91      1015
```

In [142…
```
plt.style.use('fivethirtyeight')
ConfusionMatrixDisplay.from_predictions(y_val,y_val_pred)
plt.grid(False)
plt.show()
```



In [143…
```
plt.plot(history.history['fbeta'], label='train')
plt.plot(history.history['val_fbeta'], label='test')
plt.legend()
plt.show()
```



Despite my best efforts I can't get the Neural Network Model to achieve more than a .77 on recall score on the validation set. It's a good score, but given the higher level of interpretability, I will probably opt for the simpler models.

Conclusions

Experimenting with the neural networks proved difficult. I struggled to match by best scores from using simpler models, but the dimensionality of the vectors on the Glove model may have been the difference compared to the vectors of the TFIDF and bag of words models.