

Lab_1_Actual_Notebook

November 23, 2021

```
[2]: import pandas

lyric_data = pandas.read_csv("../data/hip-hop-candidate-lyrics/
↳genius_hip_hop_lyrics.csv", encoding= "ISO-8859-1")
trump_lyrics = lyric_data[lyric_data["candidate"] == "Donald Trump"]

trump_lyrics.shape

pandas.crosstab(trump_lyrics.album_release_date, trump_lyrics.sentiment)

import seaborn
import matplotlib.pyplot as plt

trump_crosstab = pandas.crosstab(trump_lyrics.album_release_date, trump_lyrics.
↳sentiment)

trump_crosstab.plot.bar(stacked=True)
plt.legend
plt.show

print('max negative is', max(trump_crosstab['negative']))
print('max positive is', max(trump_crosstab['positive']))
```

```
max negative is 15
max positive is 19
```

```
[2]: max(trump_crosstab['positive'])
```

```
-----
NameError                                Traceback (most recent call last)
<ipython-input-2-bba5820914c9> in <module>
----> 1 max(trump_crosstab['positive'])

NameError: name 'trump_crosstab' is not defined
```

```
[9]: lyric_data
```

```
[9]:      id      candidate      song      artist \
0      1  Mike Huckabee      None Shall Pass      Aesop Rock
1      2  Mike Huckabee      Wellstone      Soul Khan
2      3      Jeb Bush      Awe      Dez & Nobs
3      4      Jeb Bush      The Truth      Diabolic
4      5      Jeb Bush      Money Man      Gorilla Zoe
..      ...      ...      ...      ...
372  374  Donald Trump      On the Way      Young Thug
373  375  Donald Trump      Digest It      Tiara
374  376  Donald Trump      Constantly Hating      Young Thug
375  377  Donald Trump  FDT (Fuck Donald Trump)  YG & Nipsey Hussle
376  378  Donald Trump      It's Goin' Down      Yung Joc
```

```
      sentiment      theme  album_release_date \
0      neutral      NaN      2011
1      negative      NaN      2012
2      neutral      NaN      2006
3      negative  political      2006
4      negative  personal      2007
..      ...      ...      ...
372  positive      money      2014
373  negative  political      2016
374  positive      money      2015
375  negative  political      2016
376  positive      money      2006
```

```
                                line \
0  Wither by the watering hole, Border patrol / W...
1  Might find the door but never touch the key / ...
2      I heard Jeb Bush looking for a (inaudible)
3  What you heard before ain't as big of a lesson...
4  I'm comin back from Florida / Wit Jeb Bush and...
..      ...
372  Bitches got bumps and I'm rich just like Donal...
373  The world gon' end real soon, especially if Tr...
374  I've seen more holes than a golf course on Don...
375      Fuck Donald Trump
376  Boys from the hood call me black Donald Trump
```

```
                                url
0  http://genius.com/Aesop-rock-none-shall-pass-l...
1  http://genius.com/Soul-khan-wellstone-lyrics
2  http://genius.com/Dez-and-nobs-awe-lyrics
3  http://genius.com/Diabolic-the-truth-lyrics
4  http://genius.com/Gorilla-zoe-money-man-lyrics
..      ...
372  http://genius.com/Mpa-duke-on-the-way-lyrics
```

```

373     http://genius.com/Royce-da-59-digest-it-lyrics
374 http://genius.com/Young-thug-constantly-hating...
375 http://genius.com/Yg-and-nipsey-hu-le-fdt-fuck...
376     http://genius.com/Yung-joc-its-goin-down-lyrics

```

```
[377 rows x 9 columns]
```

```
[11]: Hey_papi_lyrics = lyric_data[lyric_data["song"] == "Hey Papi"]
      Hey_papi_lyrics
```

```
[11]:      id      candidate      song artist sentiment  theme  album_release_date  \
135  137  Donald Trump  Hey Papi  Jay Z  positive  hotel                2000
```

```

                                line  \
135  I went to 1 Trump Plaza on their asses

```

```

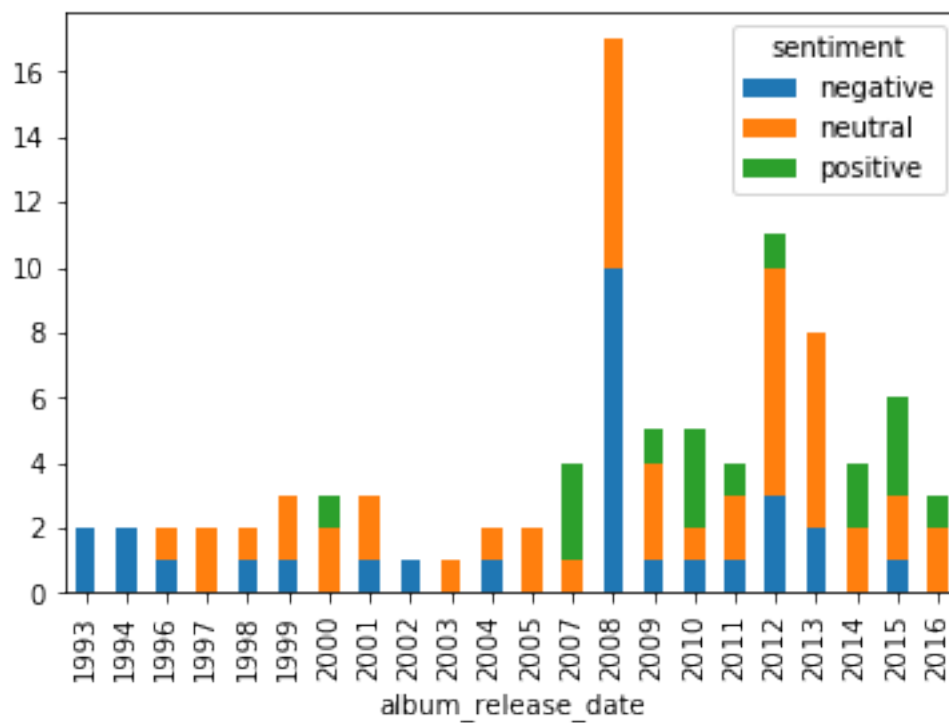
                                url
135  http://genius.com/Jay-z-hey-papi-lyrics

```

```
[13]: clinton_lyrics = lyric_data[lyric_data["candidate"] == "Hillary Clinton"]
      clinton_crosstab = pandas.crosstab(clinton_lyrics.album_release_date,
      ↪clinton_lyrics.sentiment)
      print('max negative is', max(clinton_crosstab['negative']))
      clinton_crosstab.plot.bar(stacked=True)
      plt.legend
      plt.show
```

```
max negative is 10
```

```
[13]: <function matplotlib.pyplot.show(*args, **kw)>
```



```
[14]: trump_crosstab
```

```
[14]: sentiment      negative  neutral  positive
album_release_date
1989                0          1         2
1990                0          0         2
1991                0          0         2
1992                0          1         3
1993                1          0         0
1994                0          0         3
1995                0          0         4
1996                0          0         3
1997                0          1         1
1998                0          1         6
1999                0          2         4
2000                0          2         7
2001                0          1         2
2002                0          2         7
2003                0          0         4
2004                0          0         4
2005                2          2         4
2006                0          3         9
2007                0          4         3
```

| | | | |
|------|----|----|----|
| 2008 | 0 | 3 | 6 |
| 2009 | 1 | 2 | 4 |
| 2010 | 0 | 5 | 7 |
| 2011 | 1 | 7 | 8 |
| 2012 | 0 | 3 | 14 |
| 2013 | 2 | 12 | 19 |
| 2014 | 1 | 5 | 16 |
| 2015 | 11 | 9 | 12 |
| 2016 | 15 | 8 | 4 |

```
[16]: clinton_lyrics.shape
```

```
[16]: (92, 9)
```

```
[17]: Sanders_lyrics = lyric_data[lyric_data["candidate"] == "Bernie Sanders"]
      Sanders_lyrics.shape
```

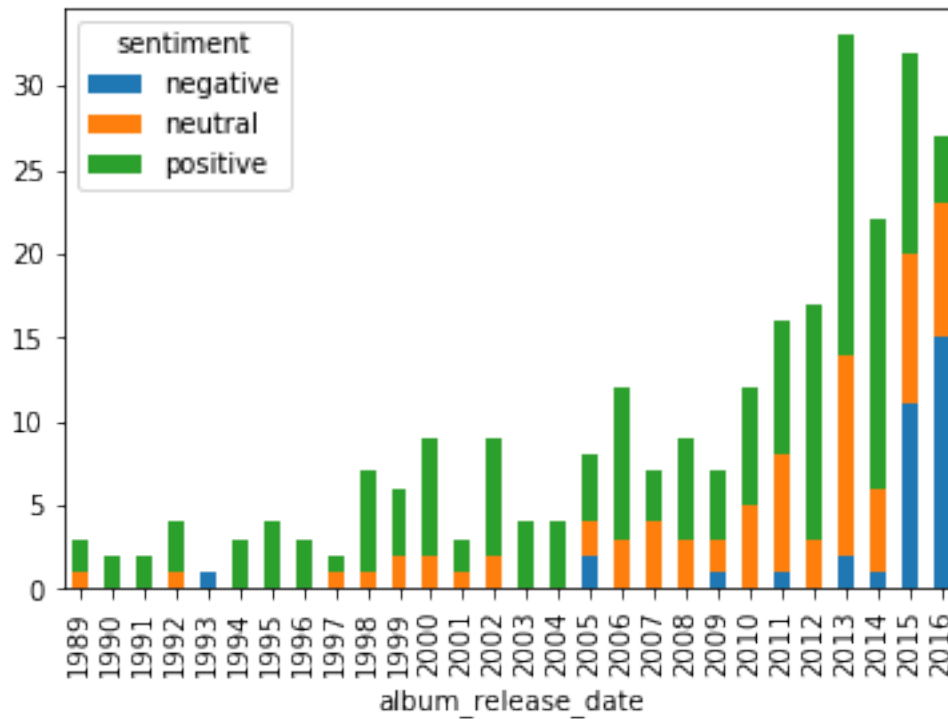
```
[17]: (2, 9)
```

```
[18]: huckabee_lyrics = lyric_data[lyric_data["candidate"] == "Mike Huckabee"]
      huckabee_lyrics.shape
```

```
[18]: (2, 9)
```

```
[7]: money_lyrics = lyric_data[lyric_data["theme"] == "money"]
      money_lyrics.shape
      money_crosstab = pandas.crosstab(money_lyrics.album_release_date, money_lyrics.
      ↪ theme)
      trump_crosstab.plot.bar(stacked=True)
```

```
[7]: <matplotlib.axes._subplots.AxesSubplot at 0x7f9a46664940>
```



```
[10]: lyric_data.candidate.unique()
```

```
[10]: array(['Mike Huckabee', 'Jeb Bush', 'Ben Carson', 'Chris Christie',
        'Ted Cruz', 'Hillary Clinton', 'Bernie Sanders', 'Donald Trump'],
        dtype=object)
```

```
[16]: trump_negative_lyrics = lyric_data[(lyric_data["candidate"] == "Donald Trump") &
        (lyric_data["sentiment"] == 'negative')]
trump_negative_lyrics.shape
```

```
[16]: (34, 9)
```

```
[17]: trump_positive_lyrics = lyric_data[(lyric_data["candidate"] == "Donald Trump") &
        (lyric_data["sentiment"] == 'positive')]
trump_positive_lyrics.shape
```

```
[17]: (160, 9)
```

```
[ ]:
```