

Billboard

Billboard Hot 100 Analysis

Xiaowei Cheng

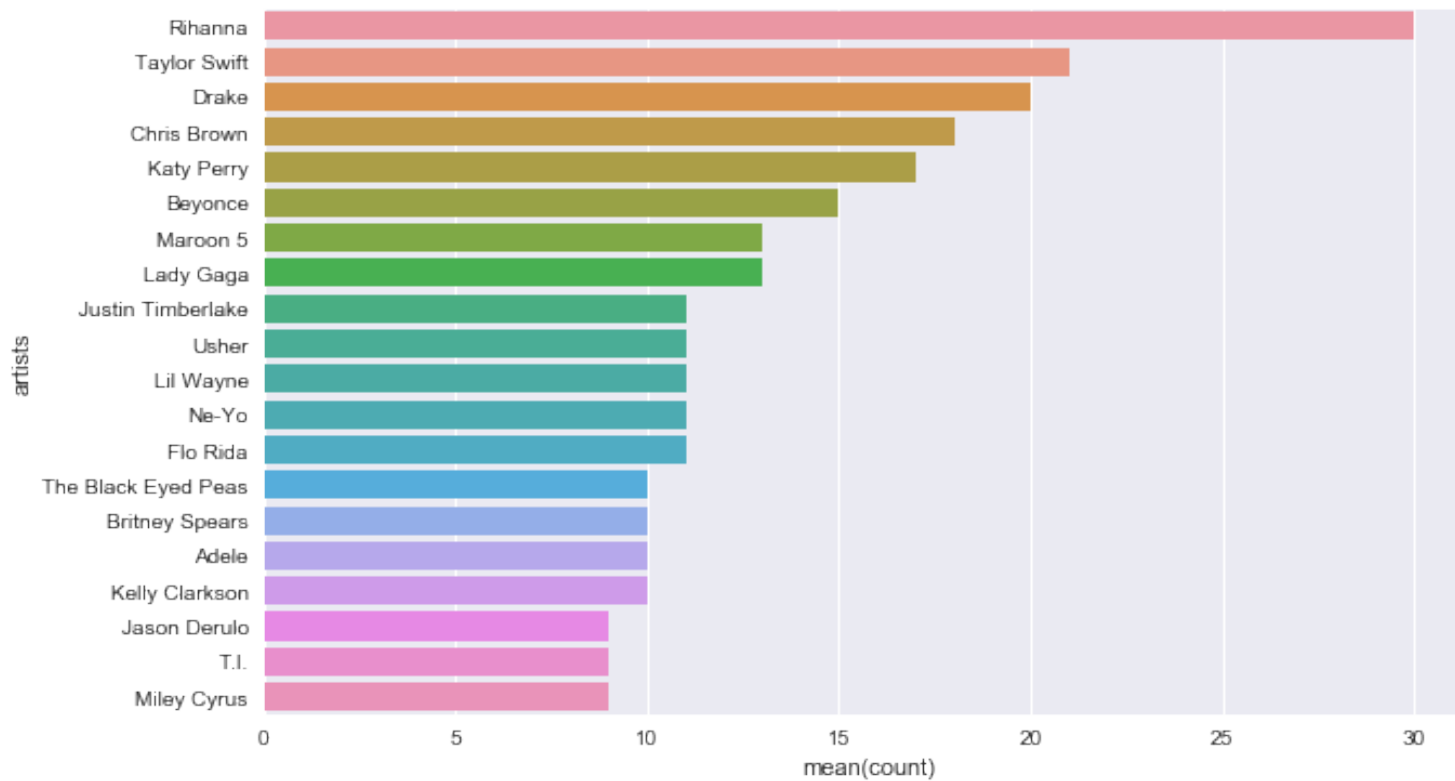
How They Define?

- A very straightforward cumulative total of yearlong sales and airplay points.



- Wikipedia

2006-2016 Hot 100 Songs



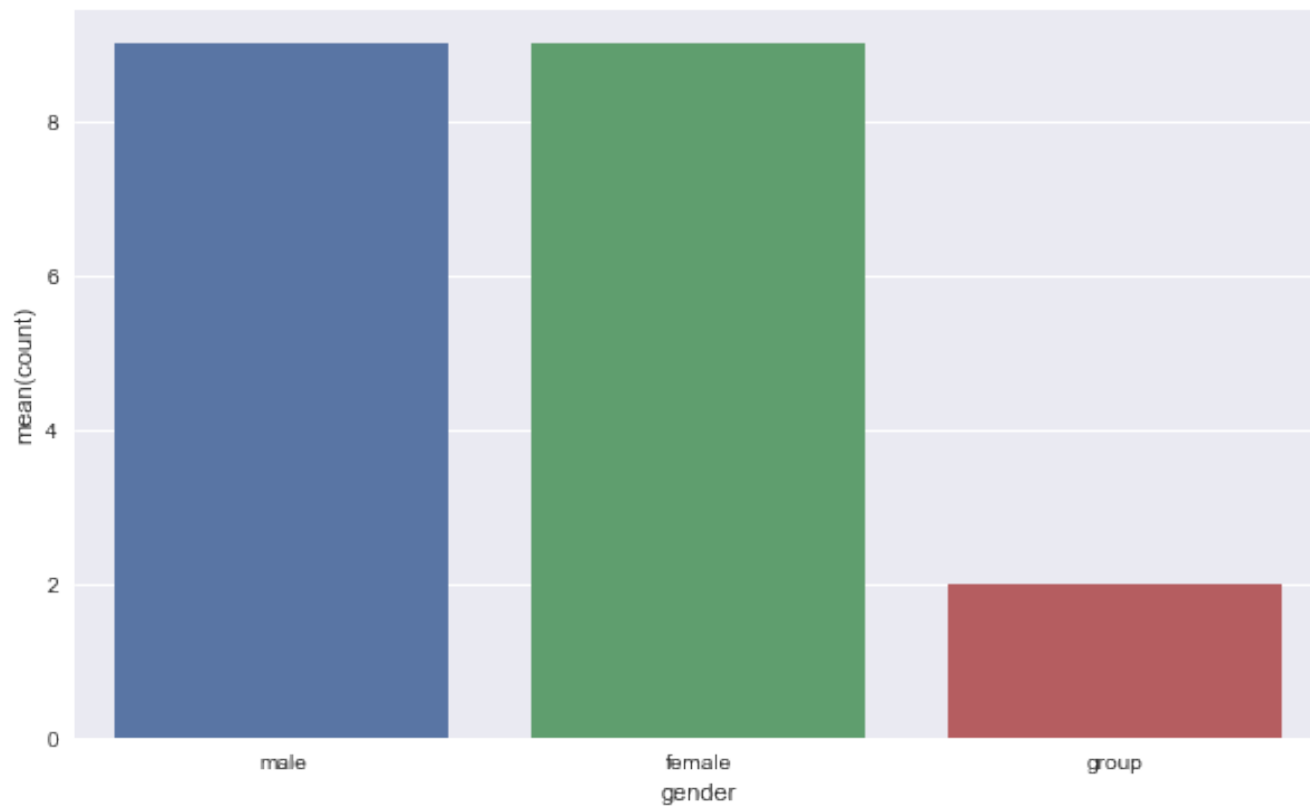
2006-2016 Hot 100 Songs



2006-2016 Hot 100 Songs

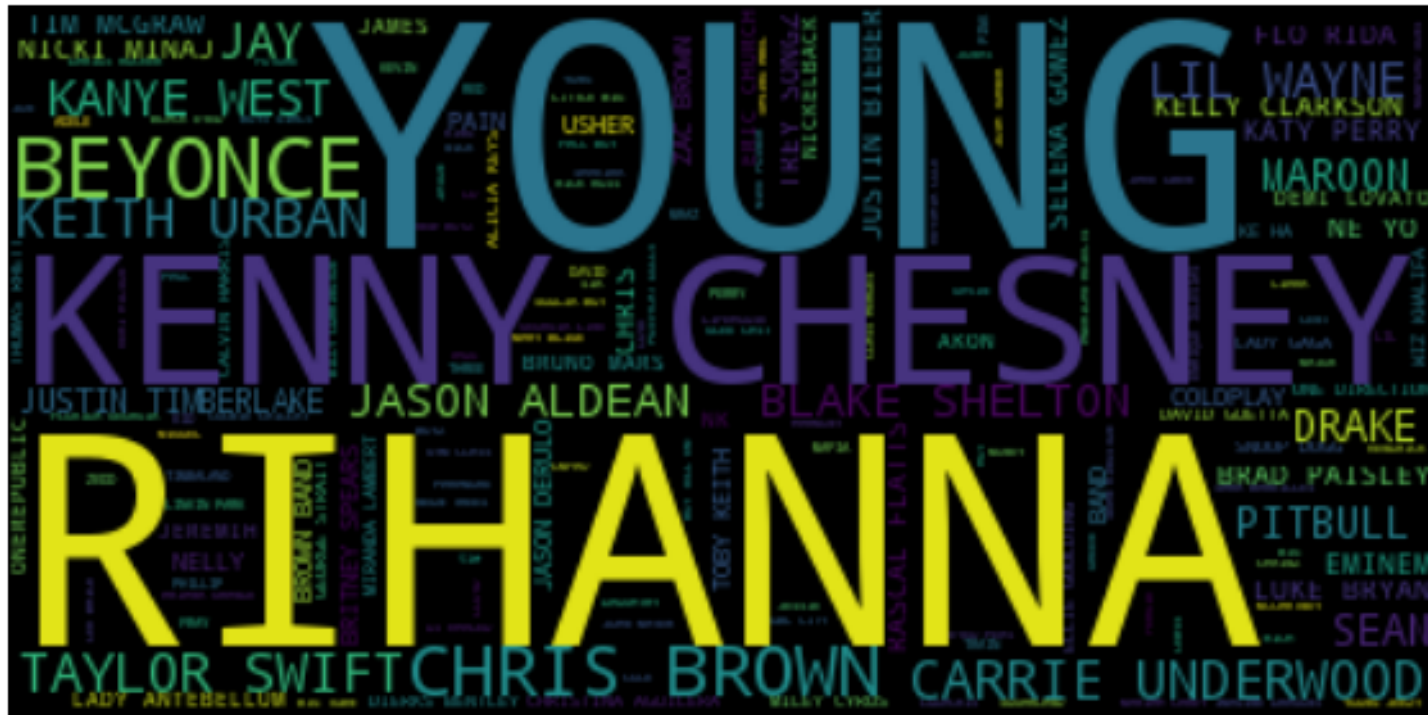


Gender?

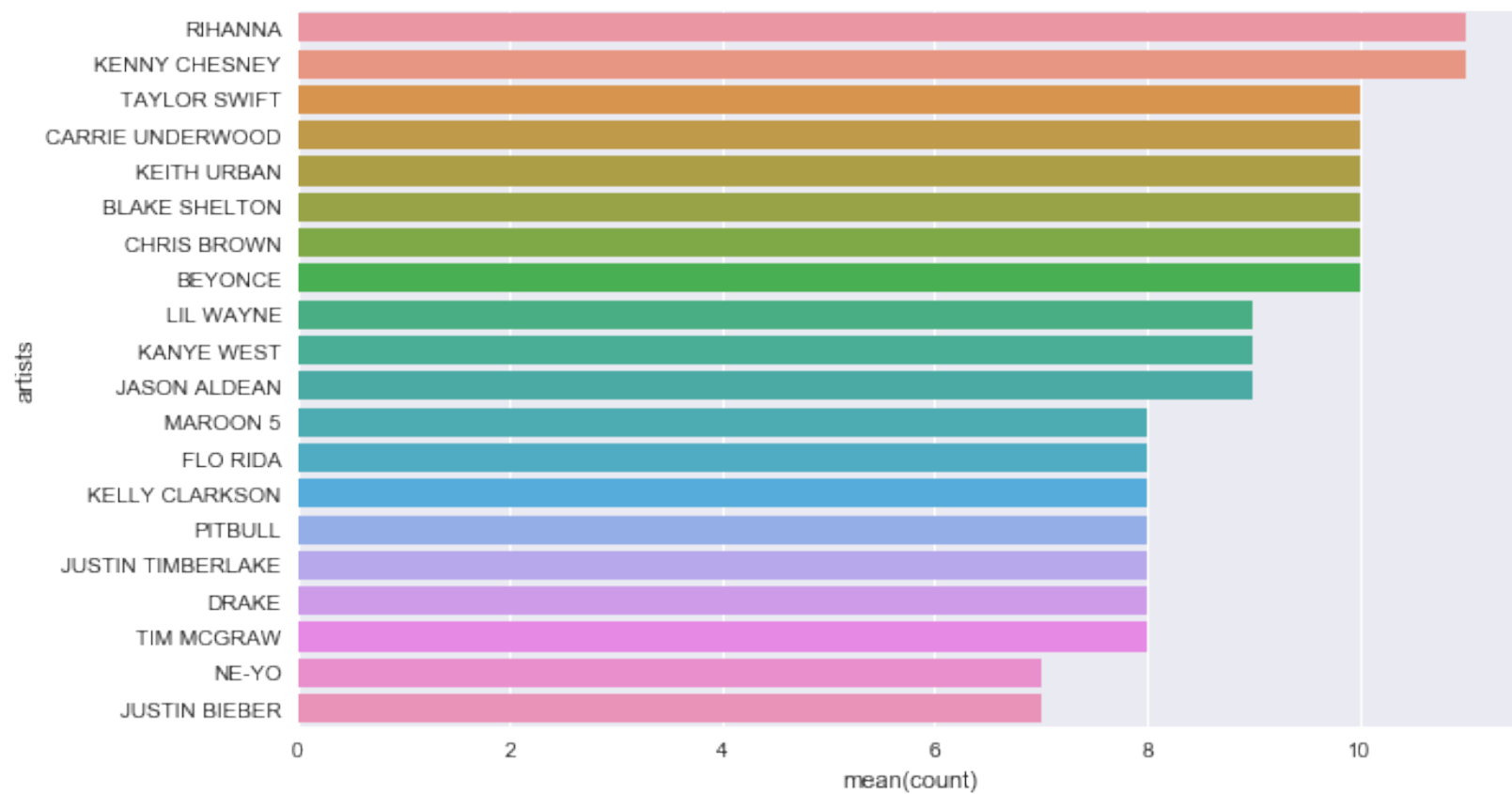


2006-2016 Hot 100 Artists

- Who is it?



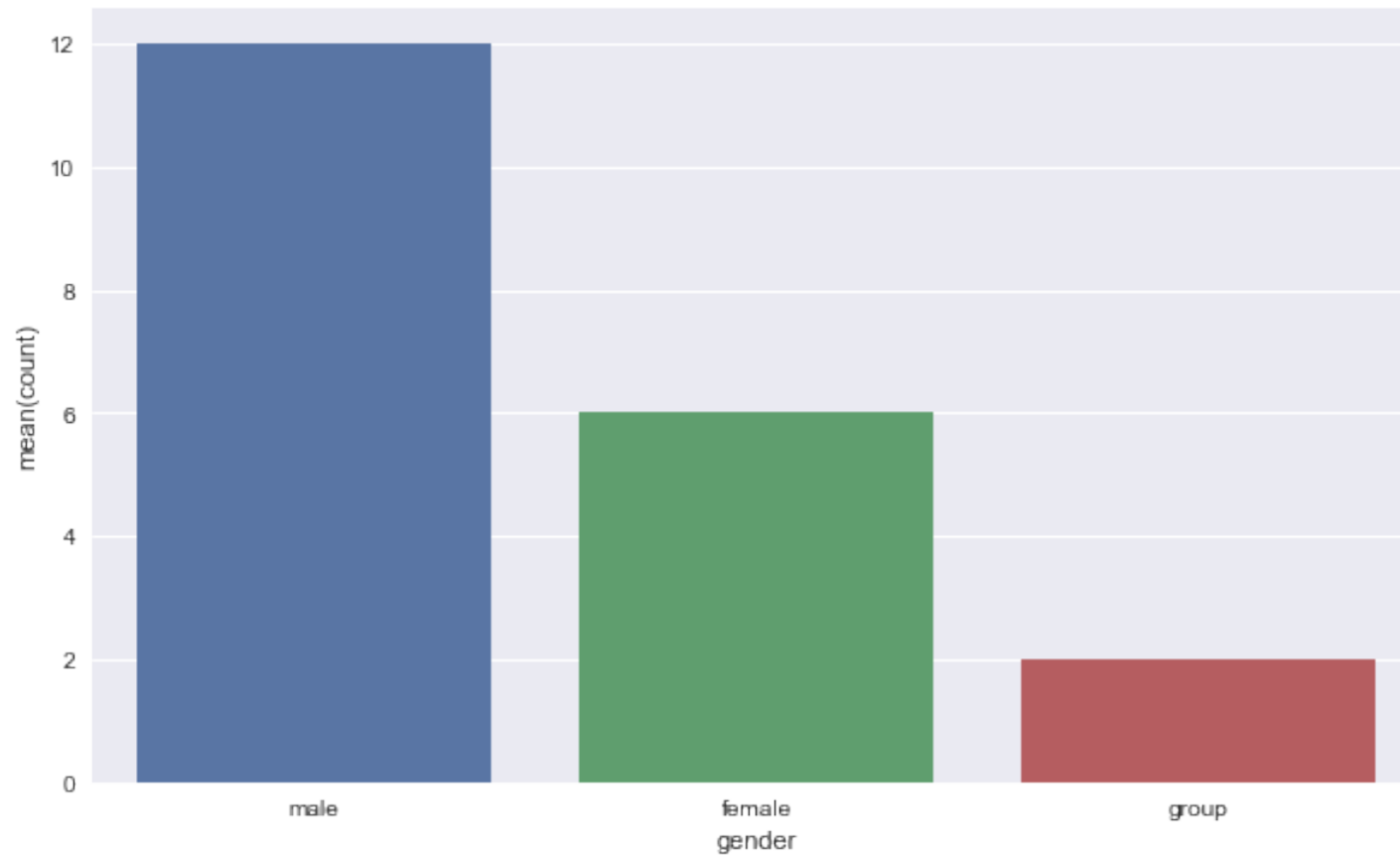
2006-2016 Hot 100 Artists



2006-2016 Hot 100 Artists



2006-2016 Hot 100 Artists



ALL TIME VS. 2006-2016 HOT

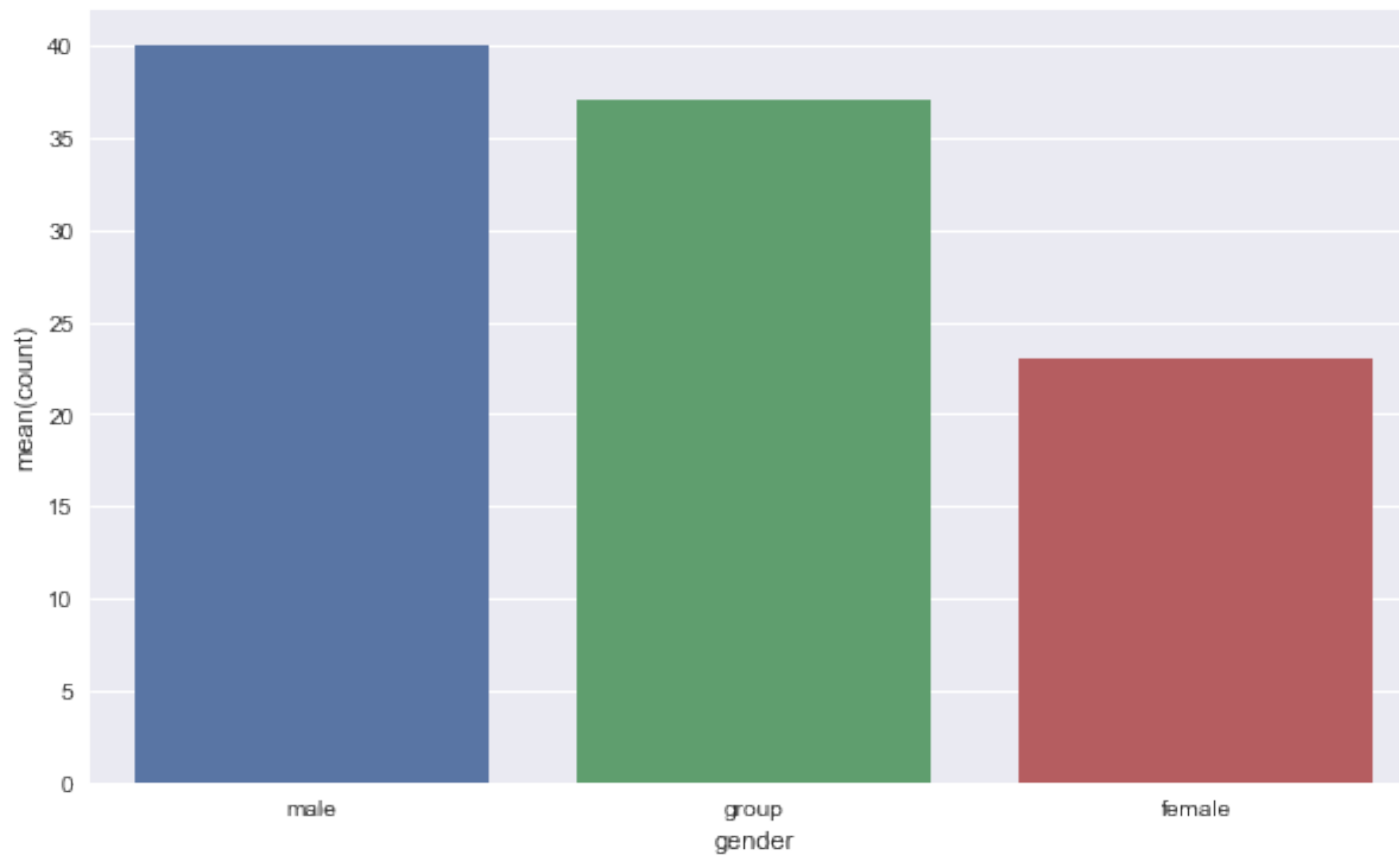
ALICIA KEYS	77.0	5
KELLY CLARKSON	79.0	8
EMINEM	85.0	7
JAY Z	86.0	2
KANYE WEST	89.0	9
JUSTIN TIMBERLAKE	90.0	8
50 CENT	97.0	3

artists	ranking	count
MADONNA	2.0	2
MARIAH CAREY	5.0	4
PAUL MCCARTNEY	11.0	1
RIHANNA	13.0	11
USHER	14.0	6
PRINCE	18.0	1
KATY PERRY	24.0	7
TAYLOR SWIFT	34.0	10
BEYONCE	39.0	10
MAROON 5	44.0	8
THE BLACK EYED PEAS	46.0	4
BON JOVI	52.0	1
PINK	53.0	5
BRUNO MARS	61.0	6
CHRIS BROWN	67.0	10
LADY GAGA	68.0	5
NELLY	71.0	4
R. KELLY	74.0	1

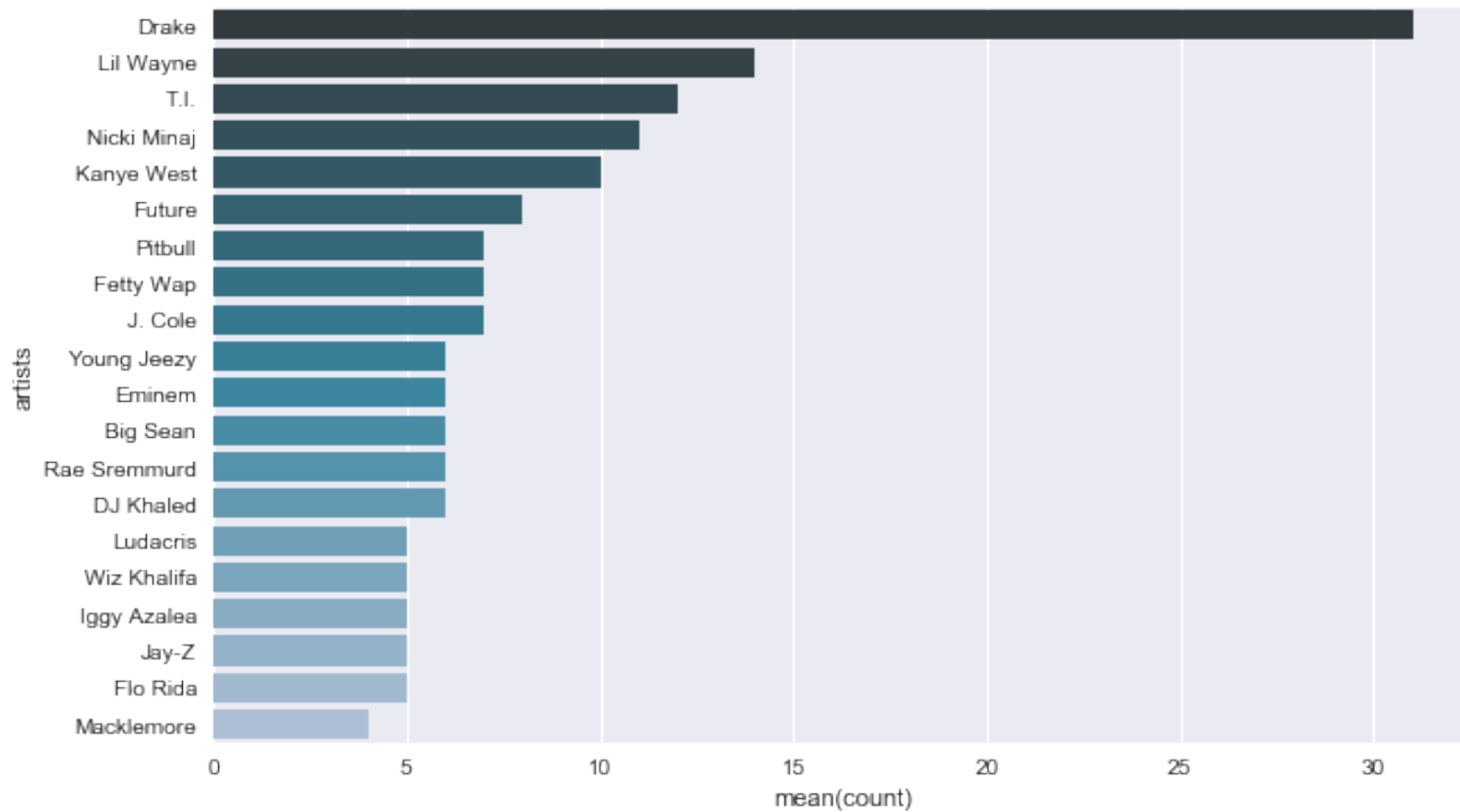
ALL TIME



ALL TIME



Genres ----- Rap



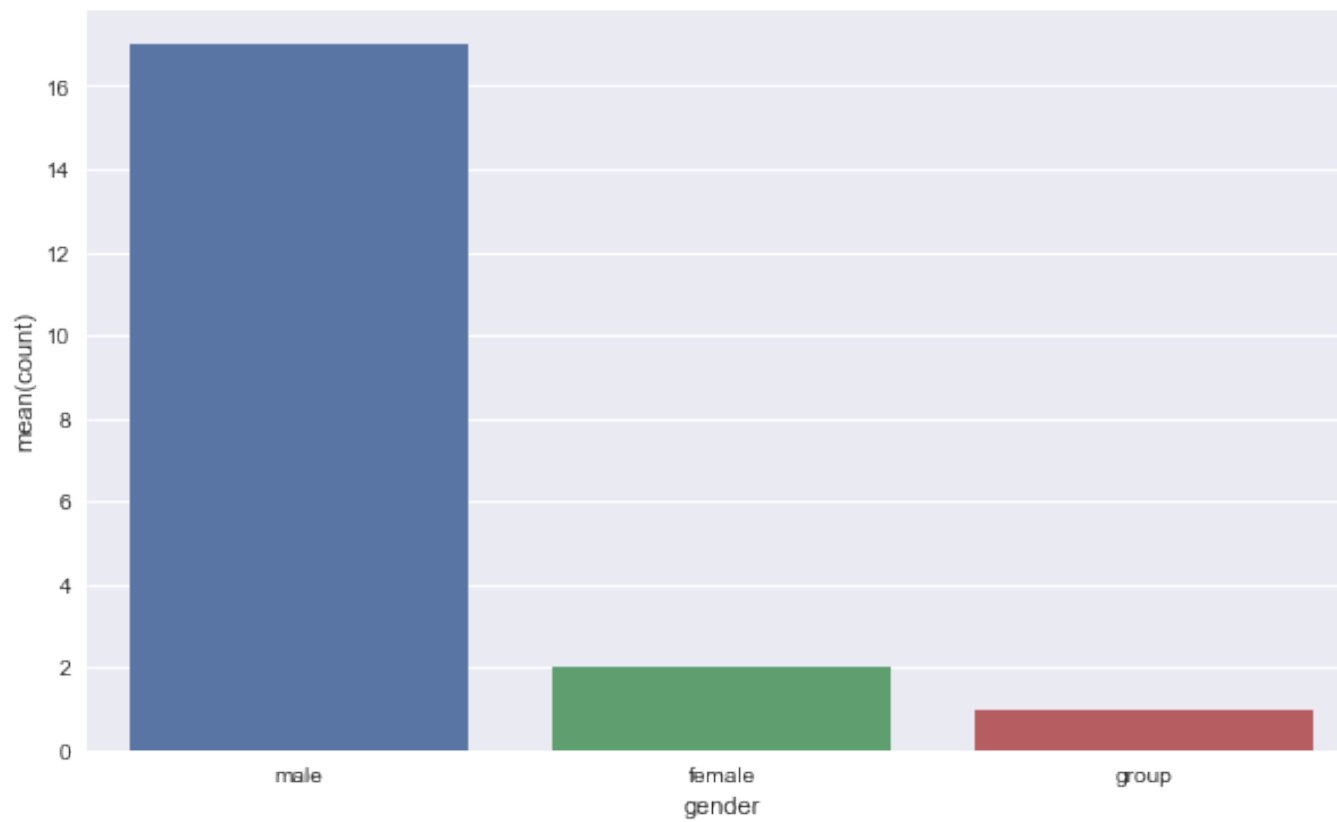
Genres ----- Rap



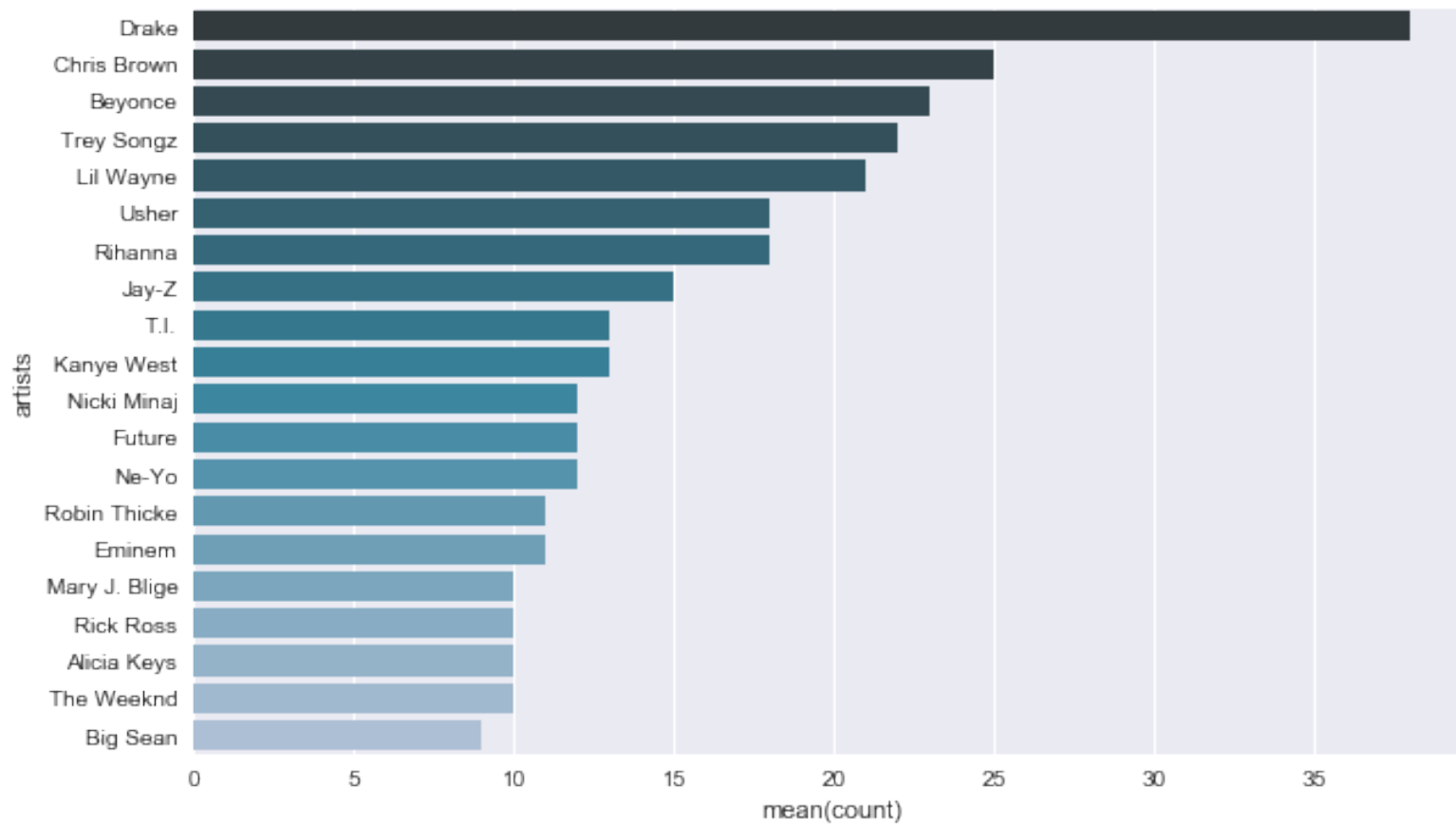
Genres ----- Rap



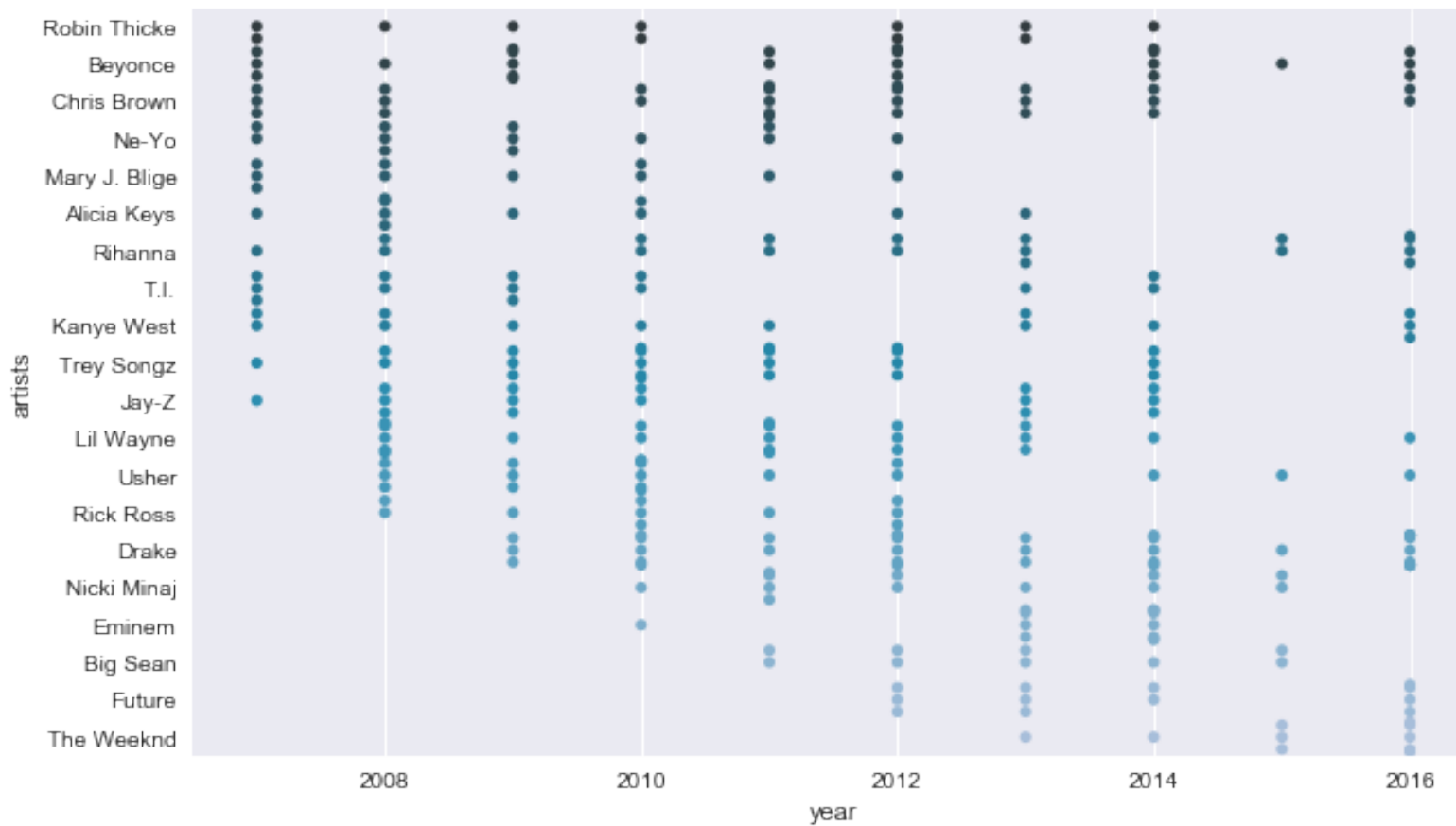
Genres ----- Rap



Genres ----- R&B, Hip-Hop



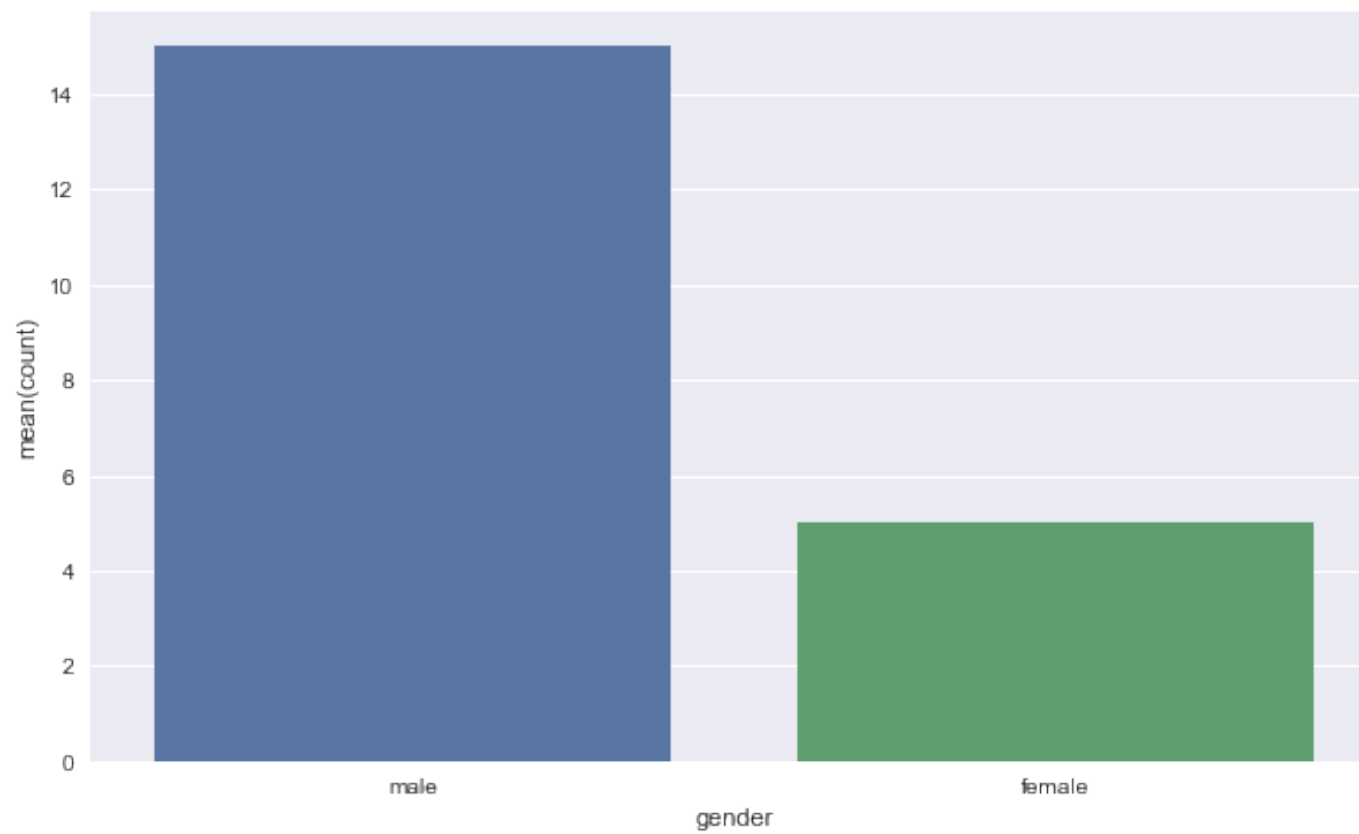
Genres ----- R&B, Hip-Hop



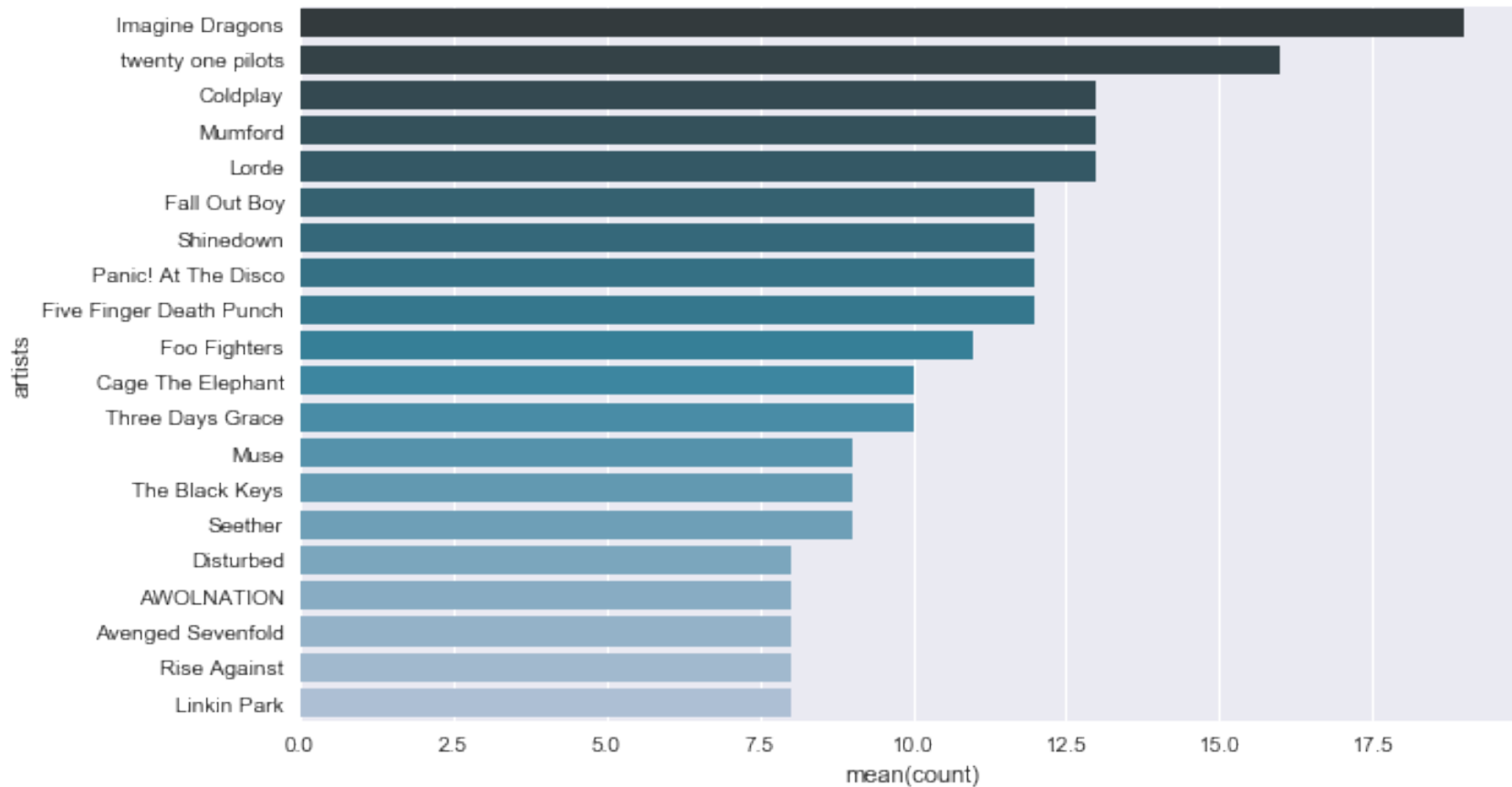
Genres ----- R&B, Hip-Hop



Genres ----- R&B, Hip-Hop



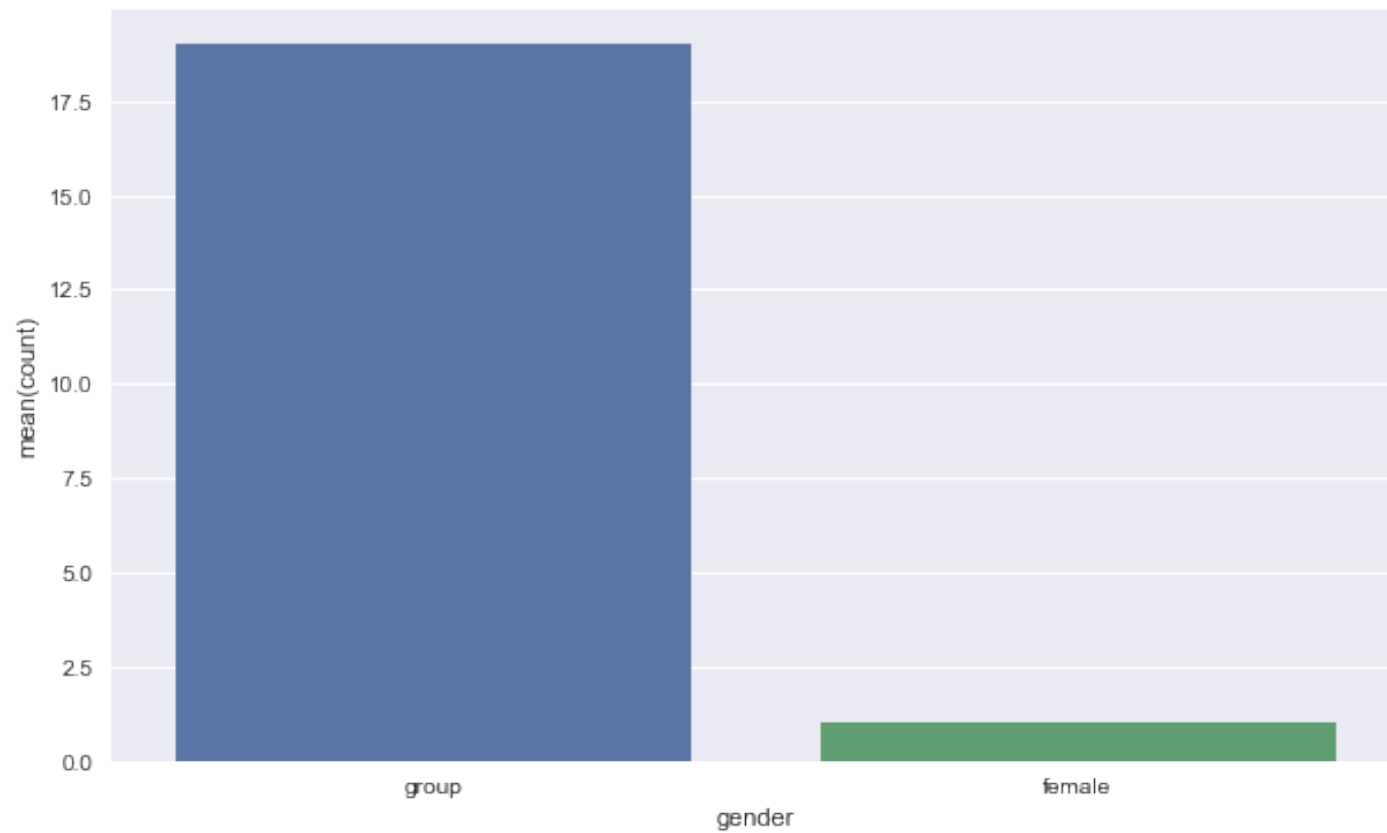
Genres ----- ROCK



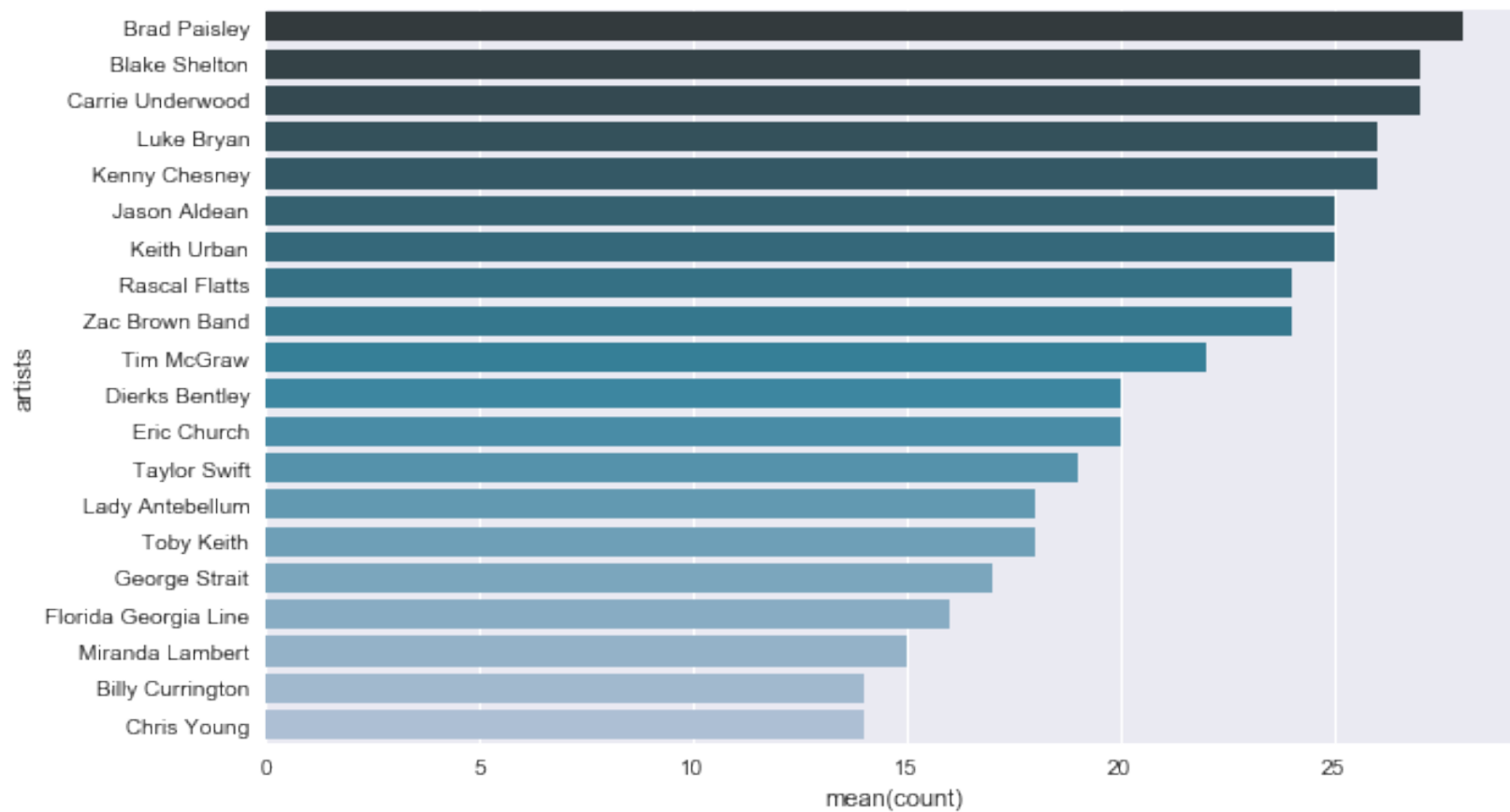
Genres ----- ROCK



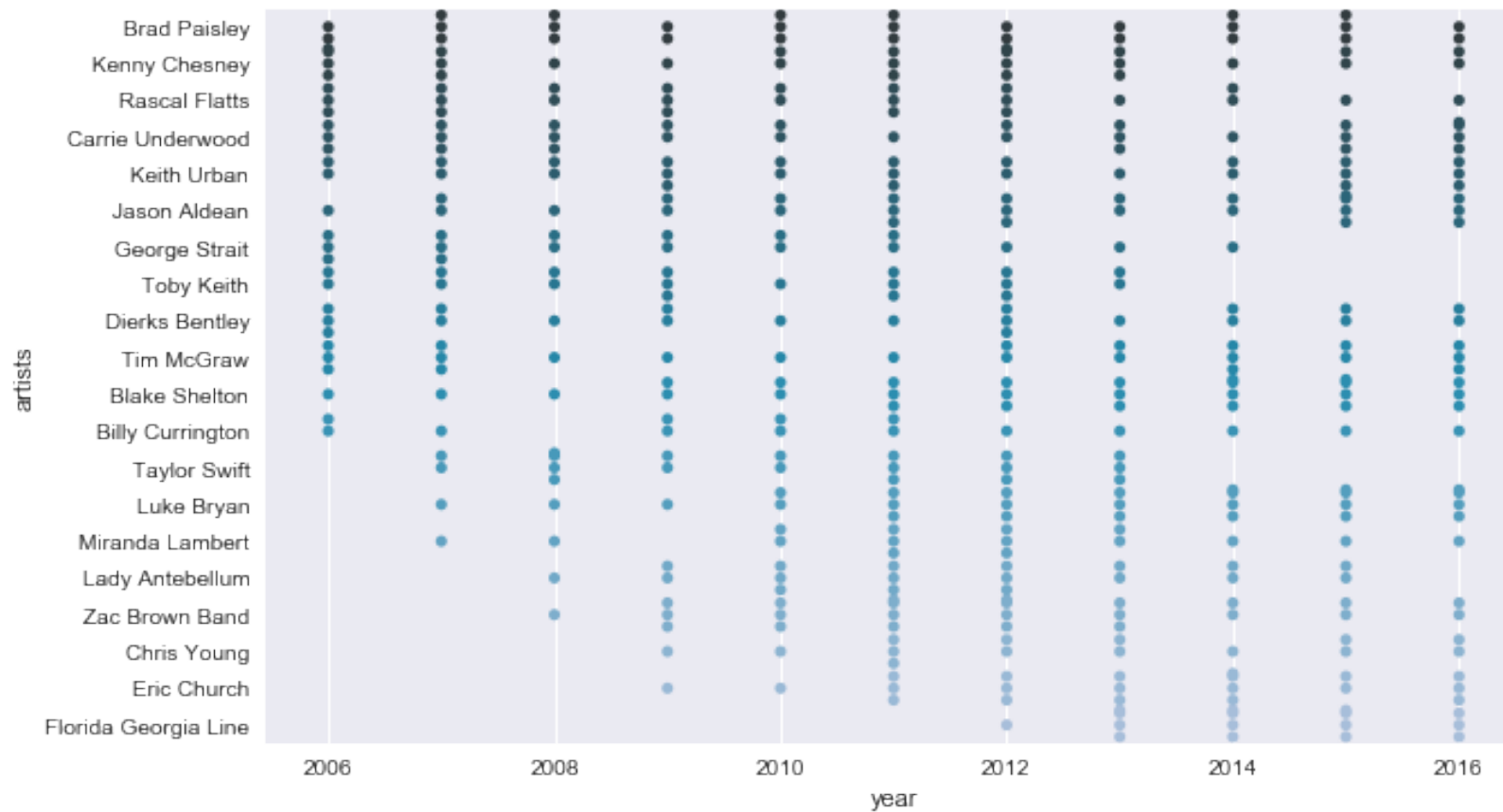
Genres ----- ROCK



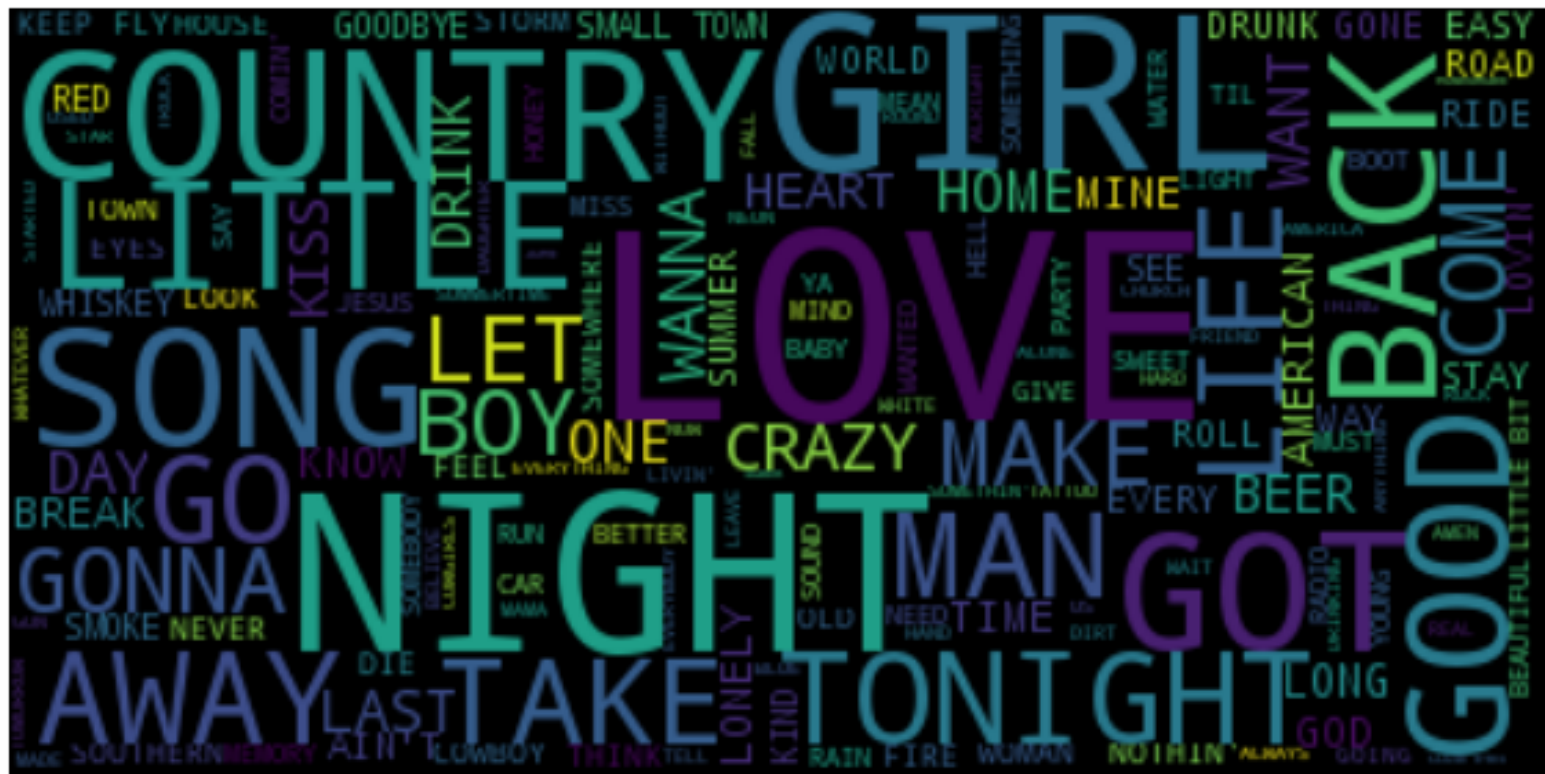
Genres ----- Country



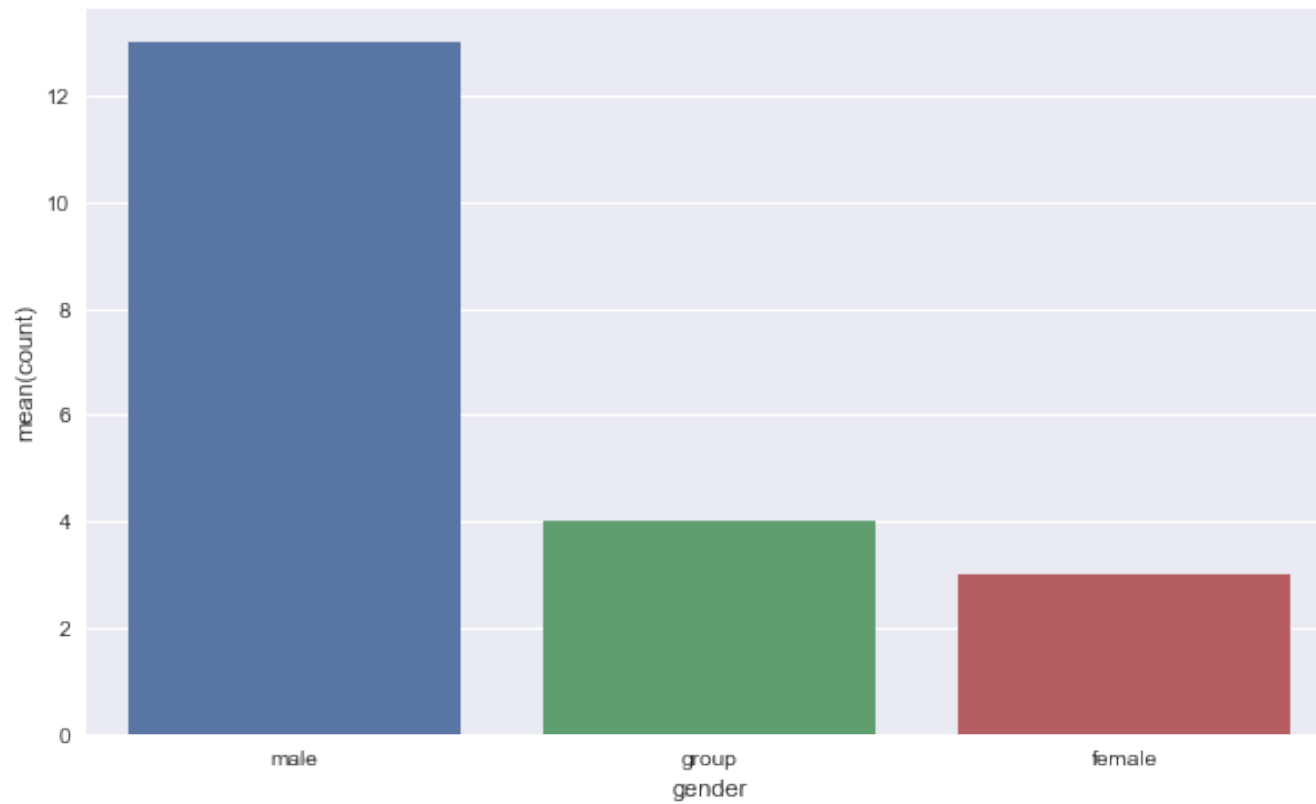
Genres ----- Country



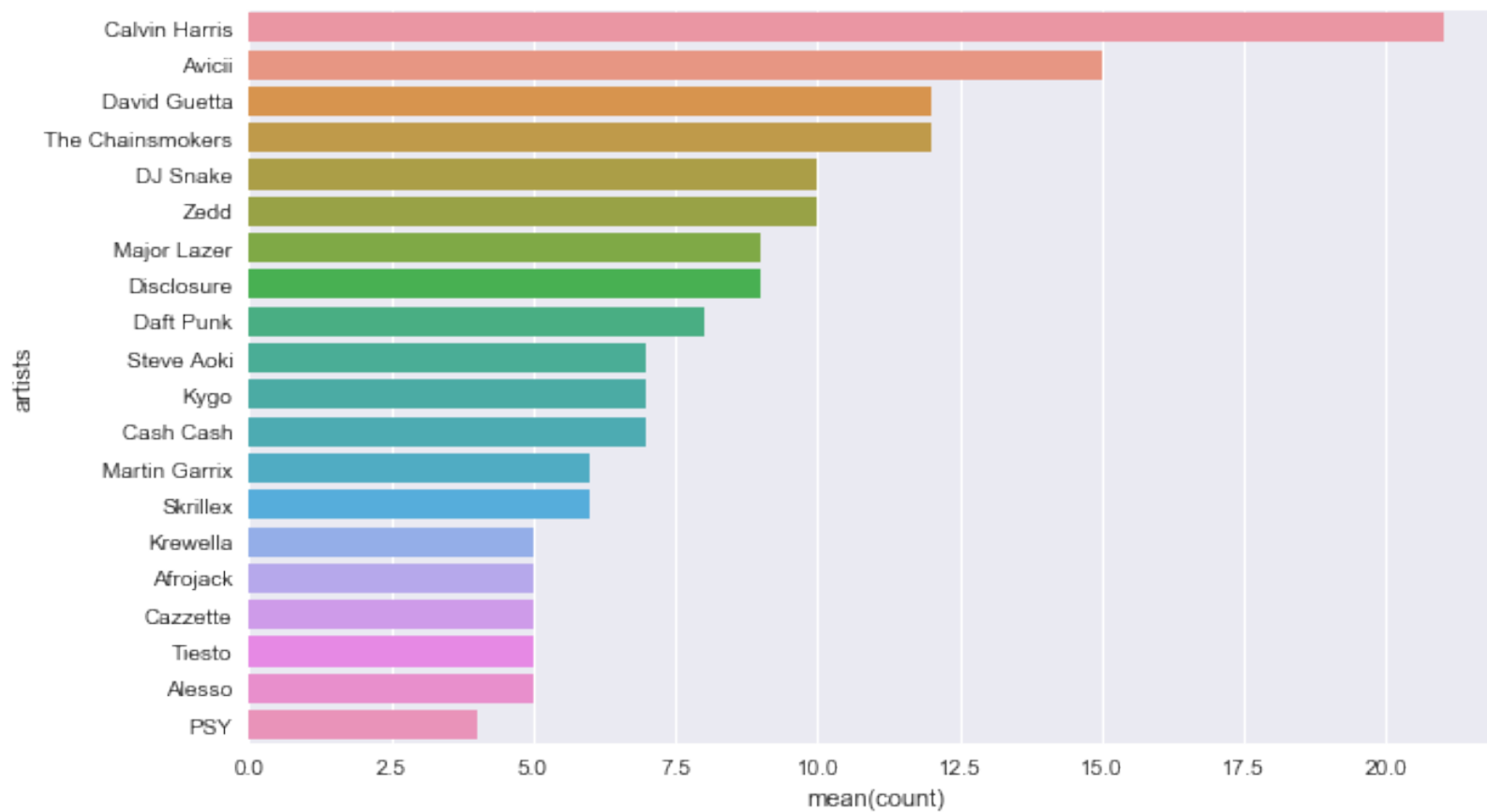
Genres ----- Country



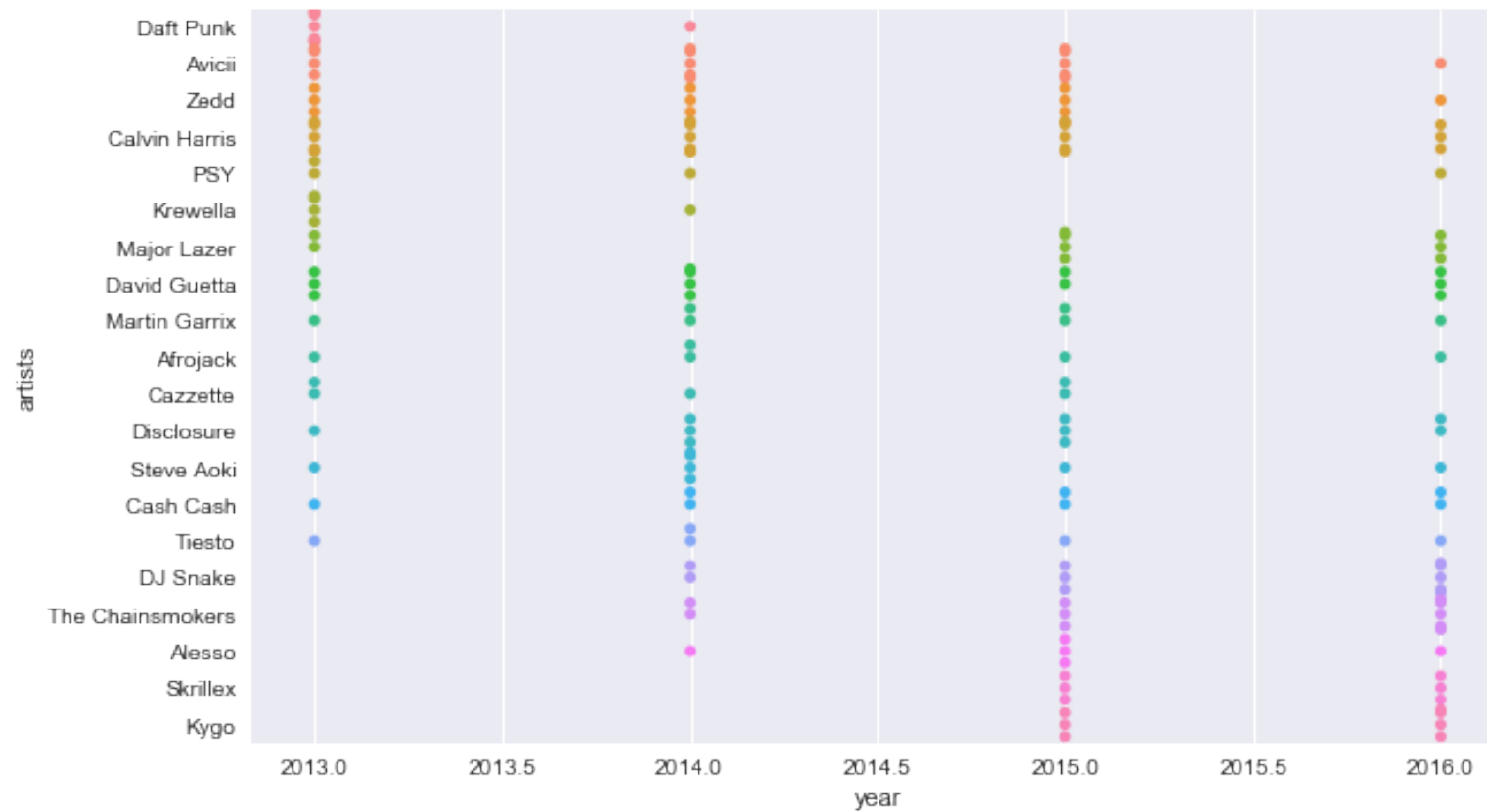
Genres ----- Country



Genres ----- EDM



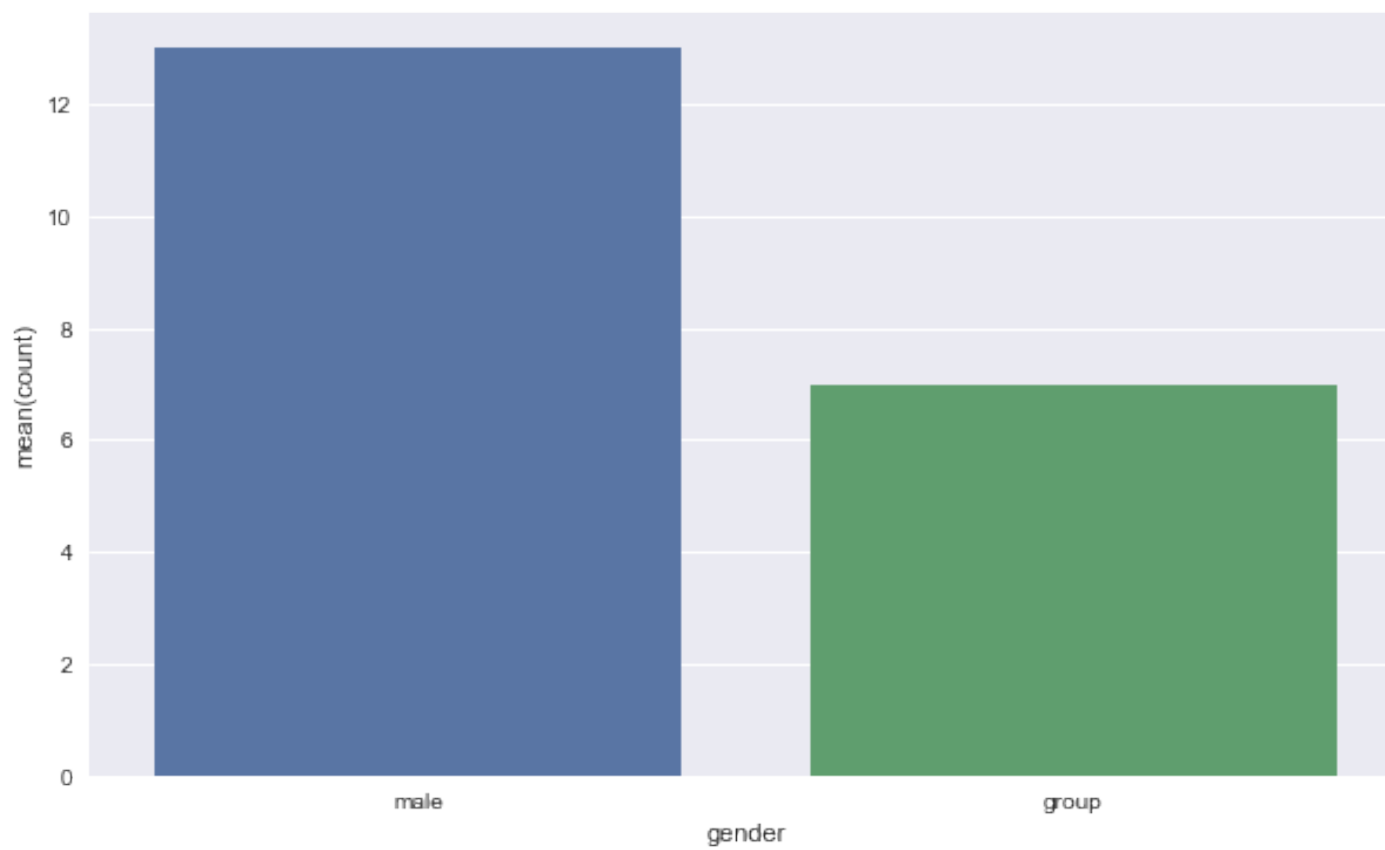
Genres ----- EDM



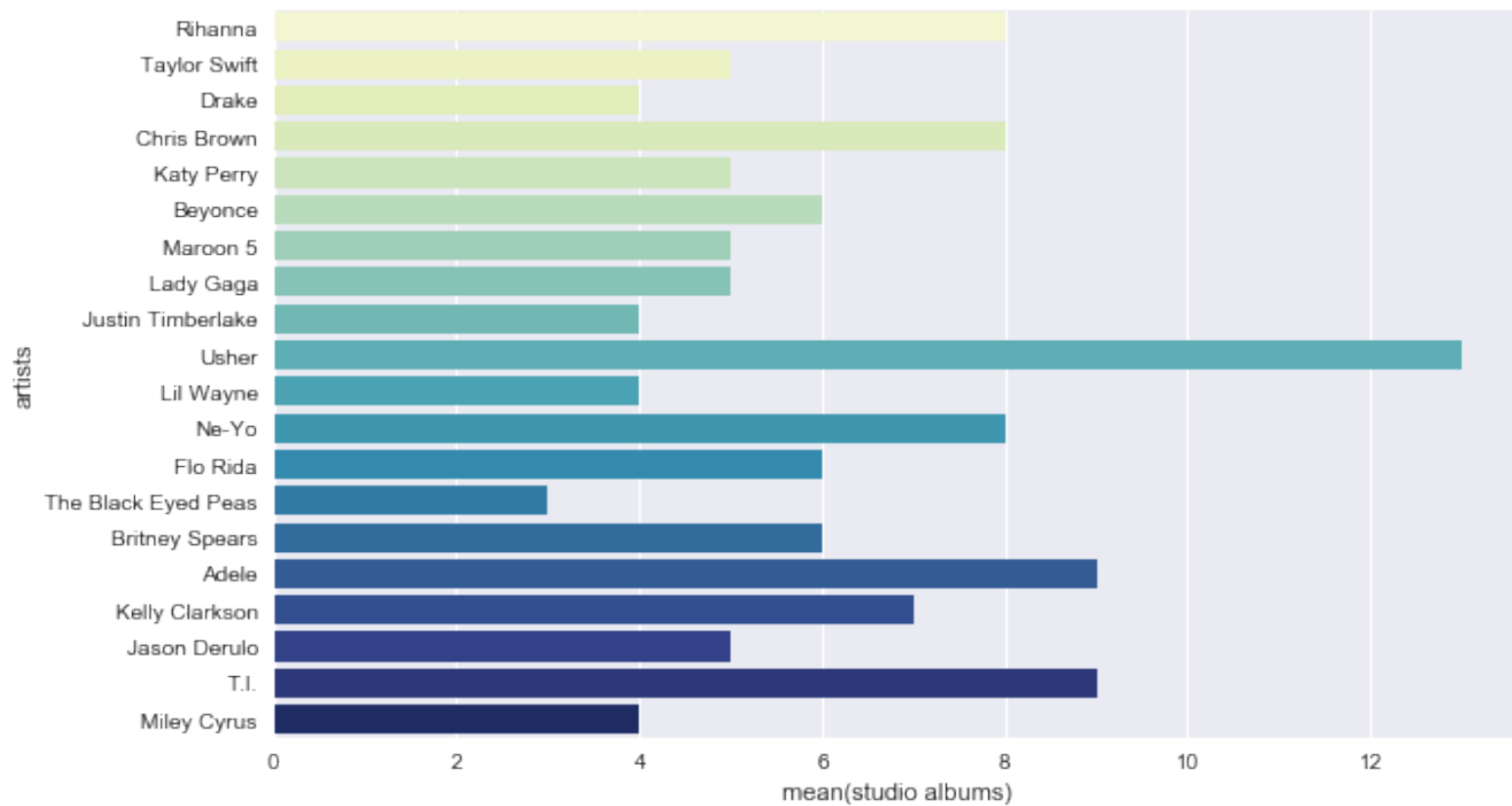
Genres ----- EDM



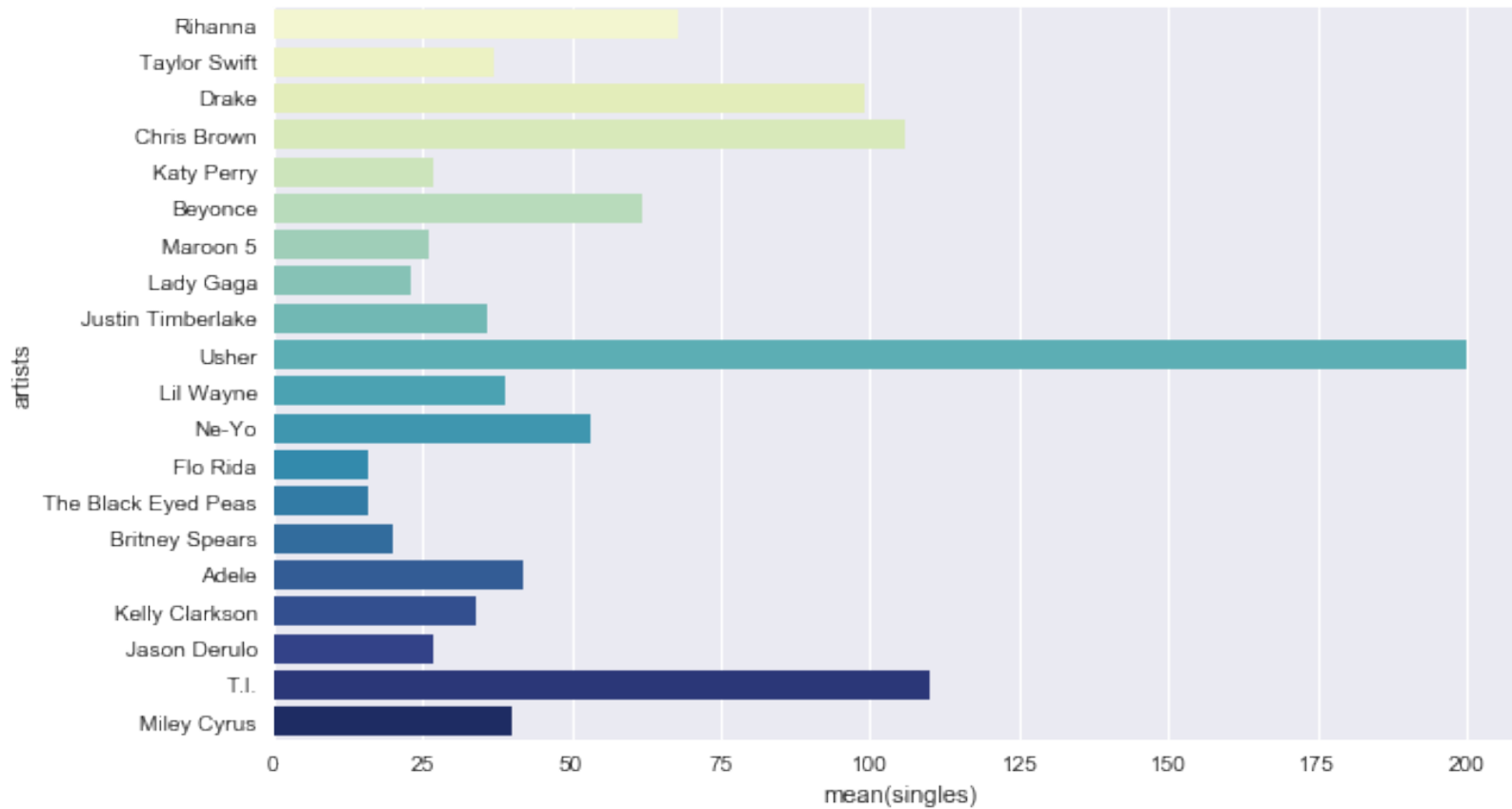
Genres ----- EDM



Total Studio Albums



Total Singles



Simple Linear Regression

```
lm = linear_model.LinearRegression()
```

```
lm.fit(ts_info[['studio albums']],ts_info[['count']])  
print(lm.coef_)  
print(lm.intercept_)  
print(lm.score(ts_info[['studio albums']],ts_info[['count']]))
```

```
[[ 0.02930403]]  
[ 13.26831502]  
0.000171446921607
```

```
lm.fit(ts_info[['singles']],ts_info[['count']])  
print(lm.coef_)  
print(lm.intercept_)  
print(lm.score(ts_info[['singles']],ts_info[['count']]))
```

```
[[ 0.01799333]]  
[ 12.47746031]  
0.0226516315944
```

Summarize

1. Love is the hottest topic
2. Some genres trend is always shifting some is stable.
3. The more singles and albums produce, does not mean more chance to get on top
4. ENJOY YOUR MUSIC!!!

Reference

- 1st Billboard logo:
https://commons.wikimedia.org/wiki/File:Billboard_logo.svg
- 2nd Billboard logo:
https://commons.wikimedia.org/wiki/File:Billboard_Hot_100_logo.jpg