

# Billboard

Billboard Hot 100 Analysis

Xiaowei Cheng

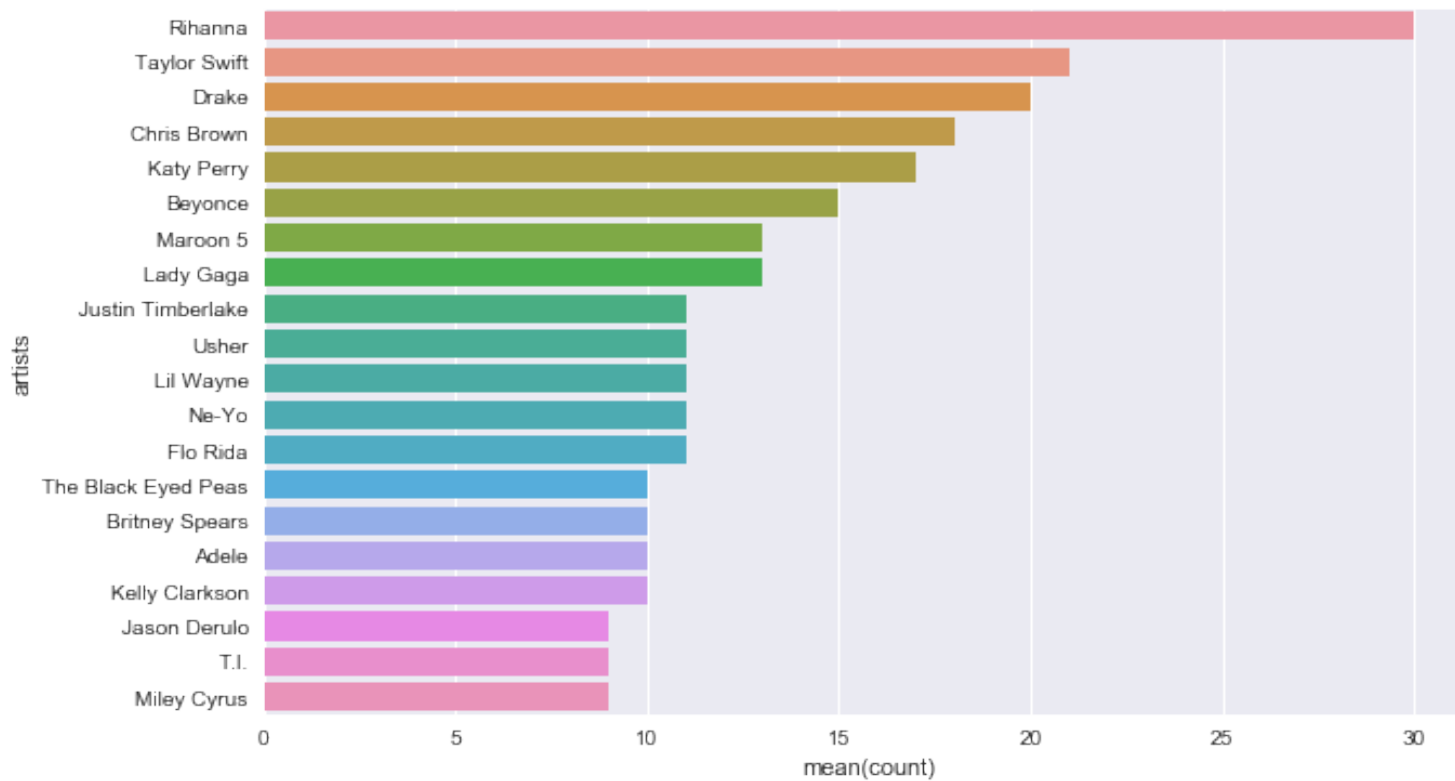
## How They Define?

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



- Wikipedia

# 2006-2016 Hot 100 Songs



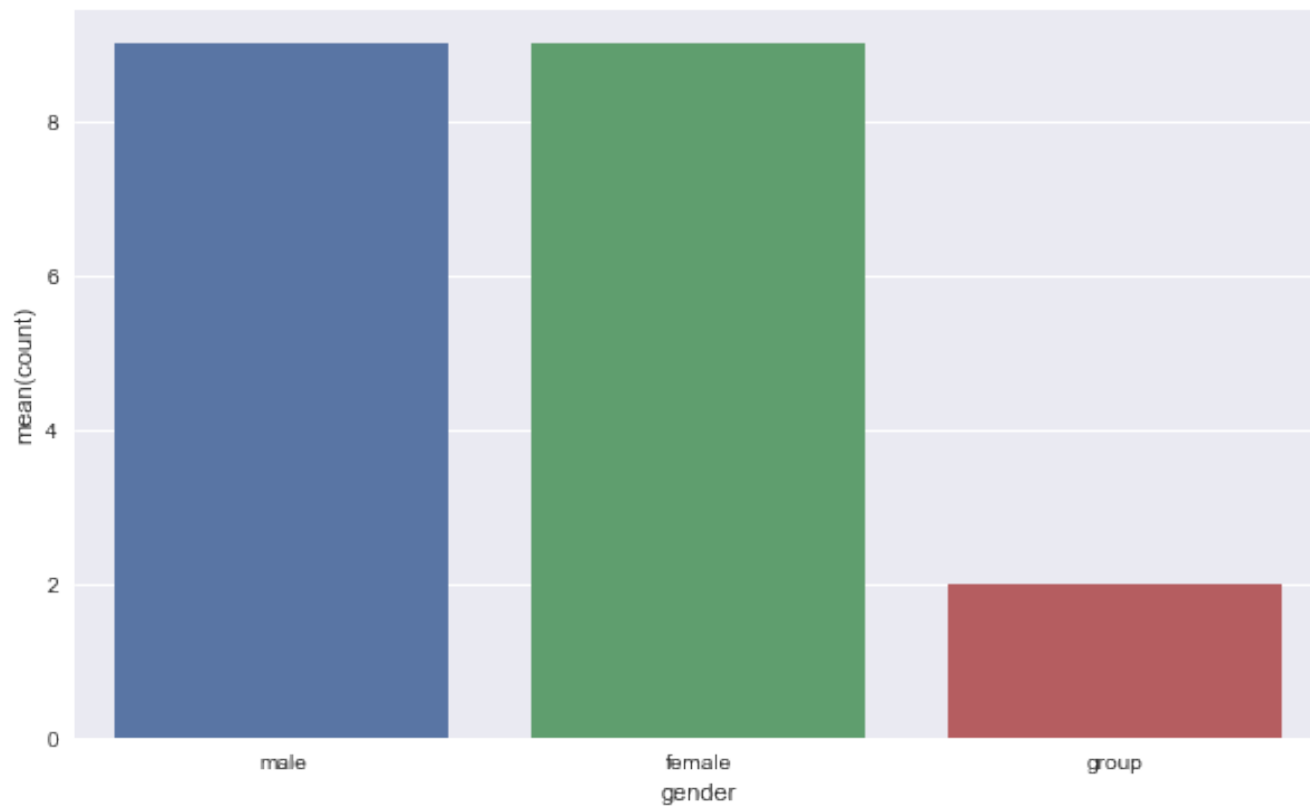
# 2006-2016 Hot 100 Songs



# 2006-2016 Hot 100 Songs

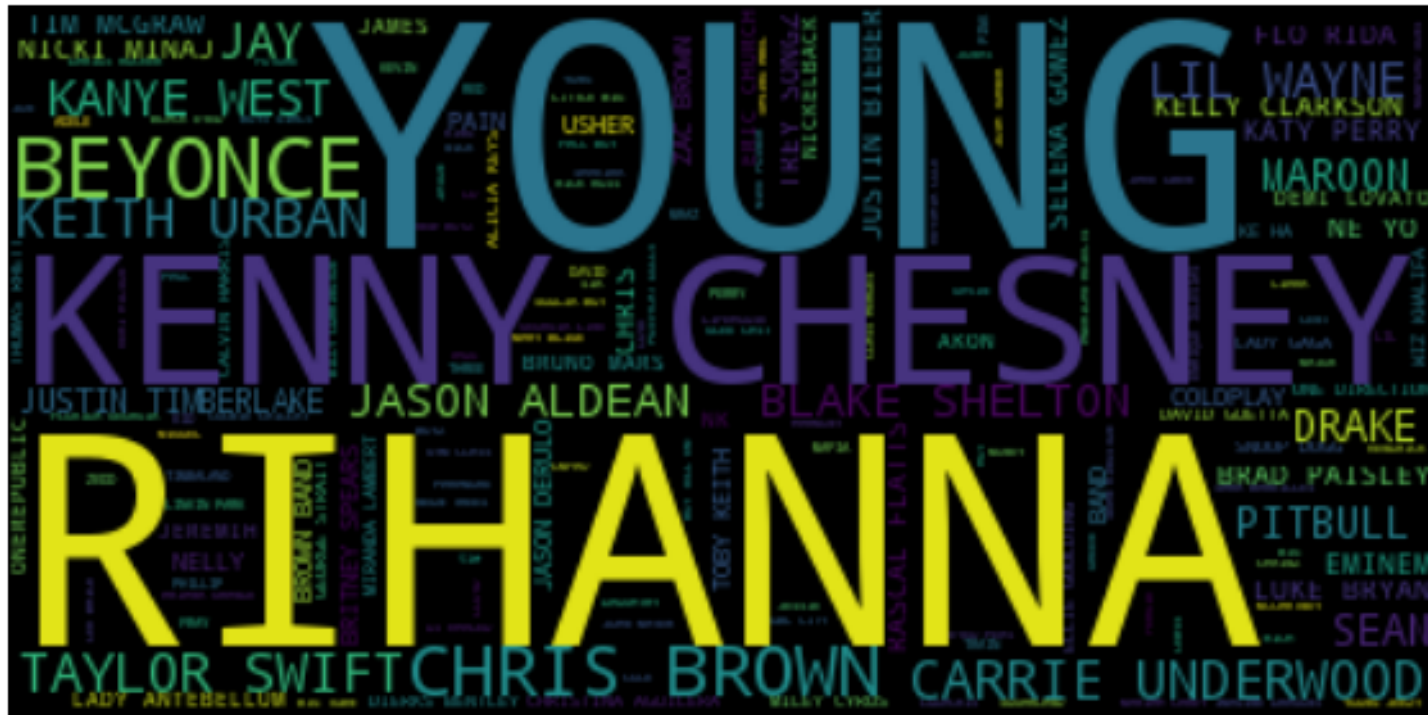


# Gender?

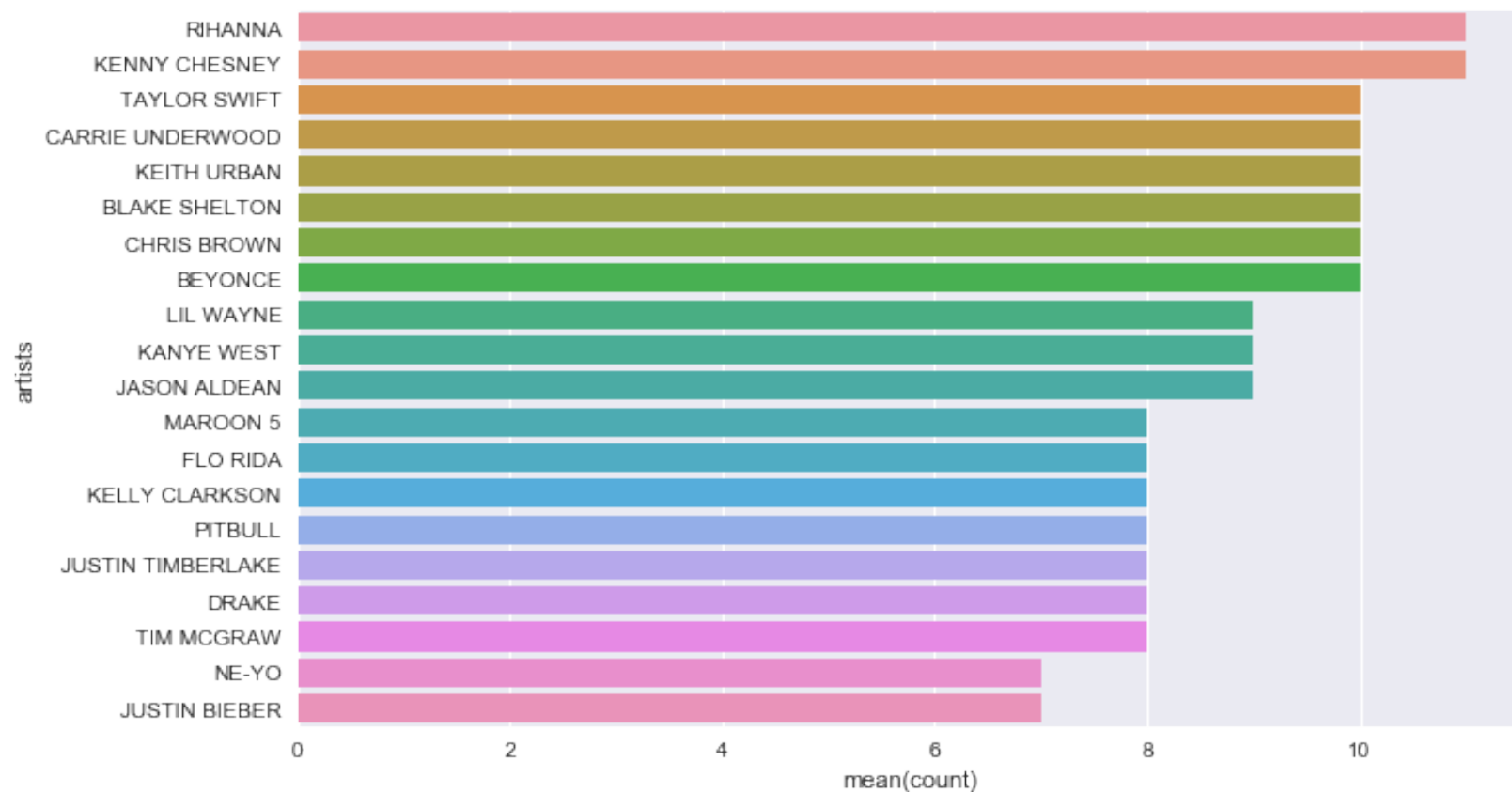


# 2006-2016 Hot 100 Artists

- Who is it?



# 2006-2016 Hot 100 Artists

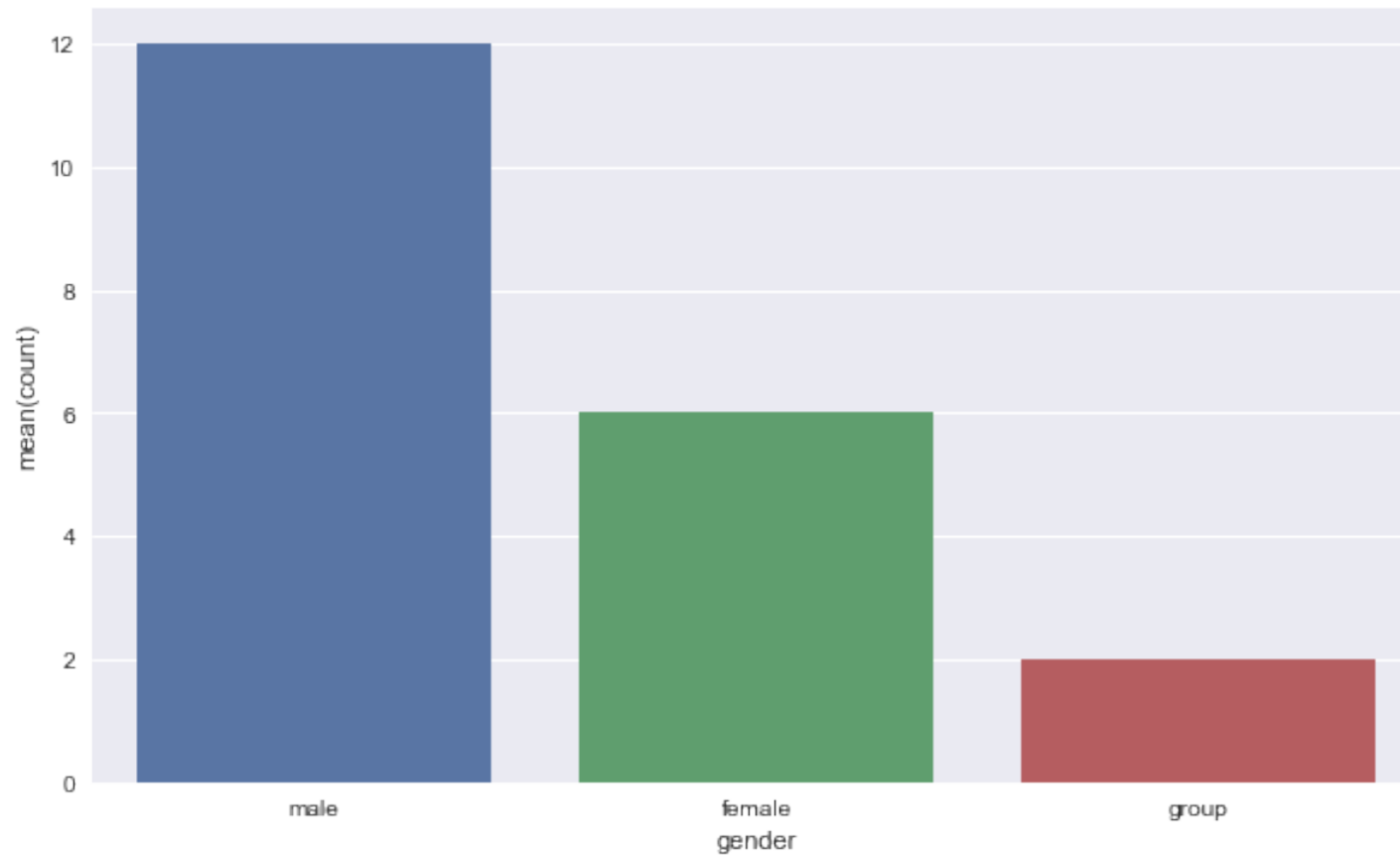




# 2006-2016 Hot 100 Artists



# 2006-2016 Hot 100 Artists

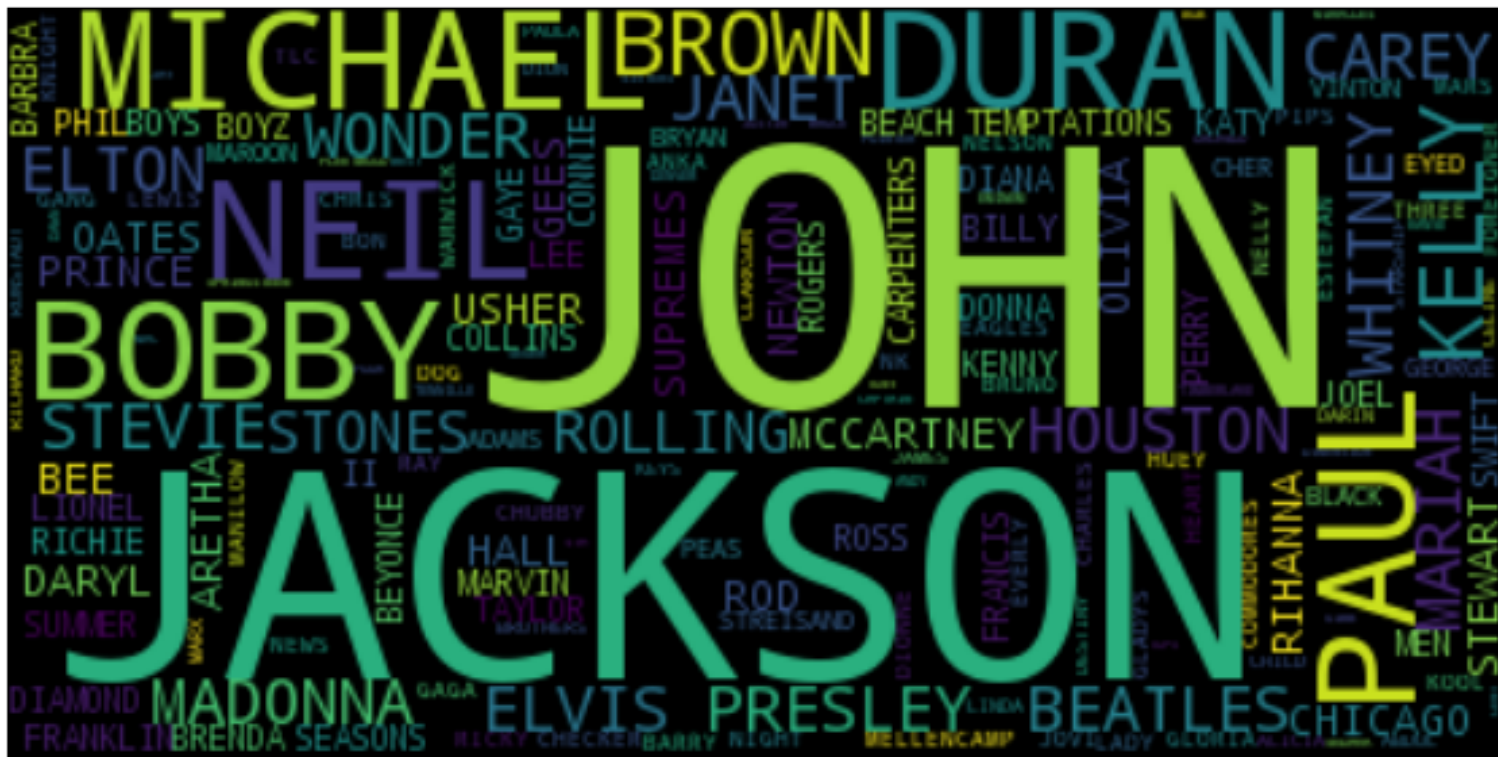


# ALL TIME VS. 2006-2016 HOT

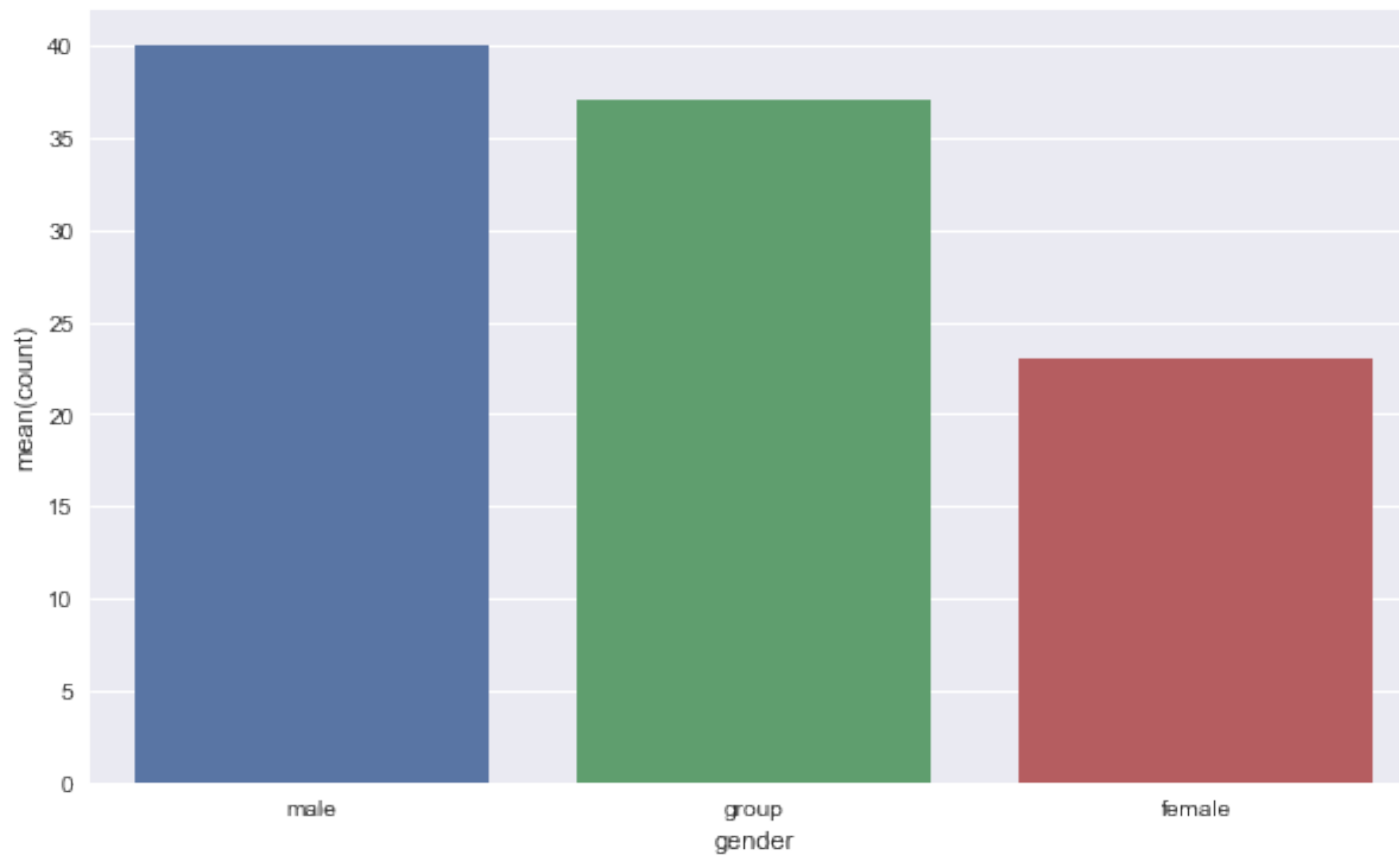
ALICIA KEYS	77.0	5
KELLY CLARKSON	79.0	8
EMINEM	85.0	7
JAY Z	86.0	2
KANYE WEST	89.0	9
JUSTIN TIMBERLAKE	90.0	8
50 CENT	97.0	3

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

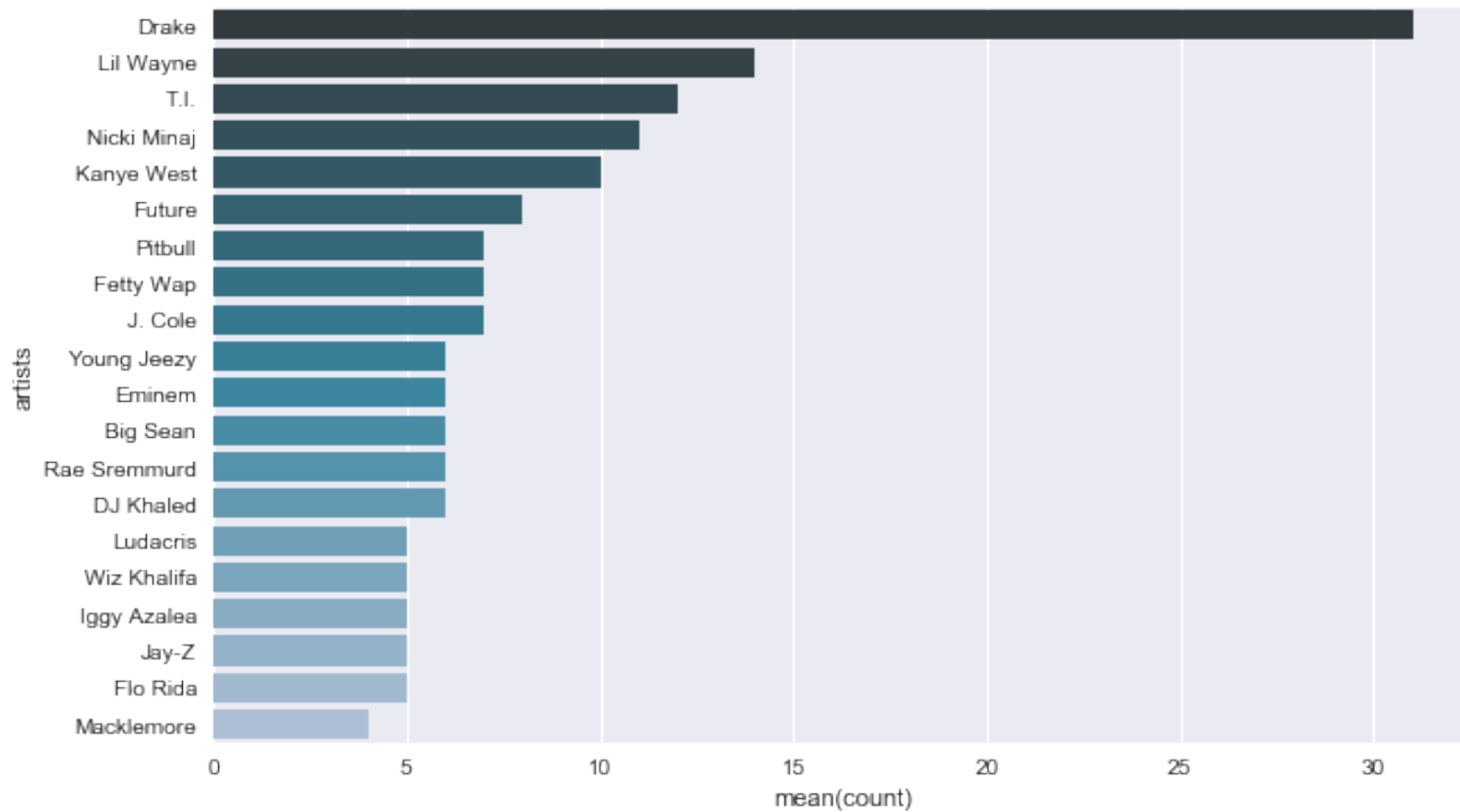
# ALL TIME



# ALL TIME



# Genres ----- Rap



Genres ----- Rap

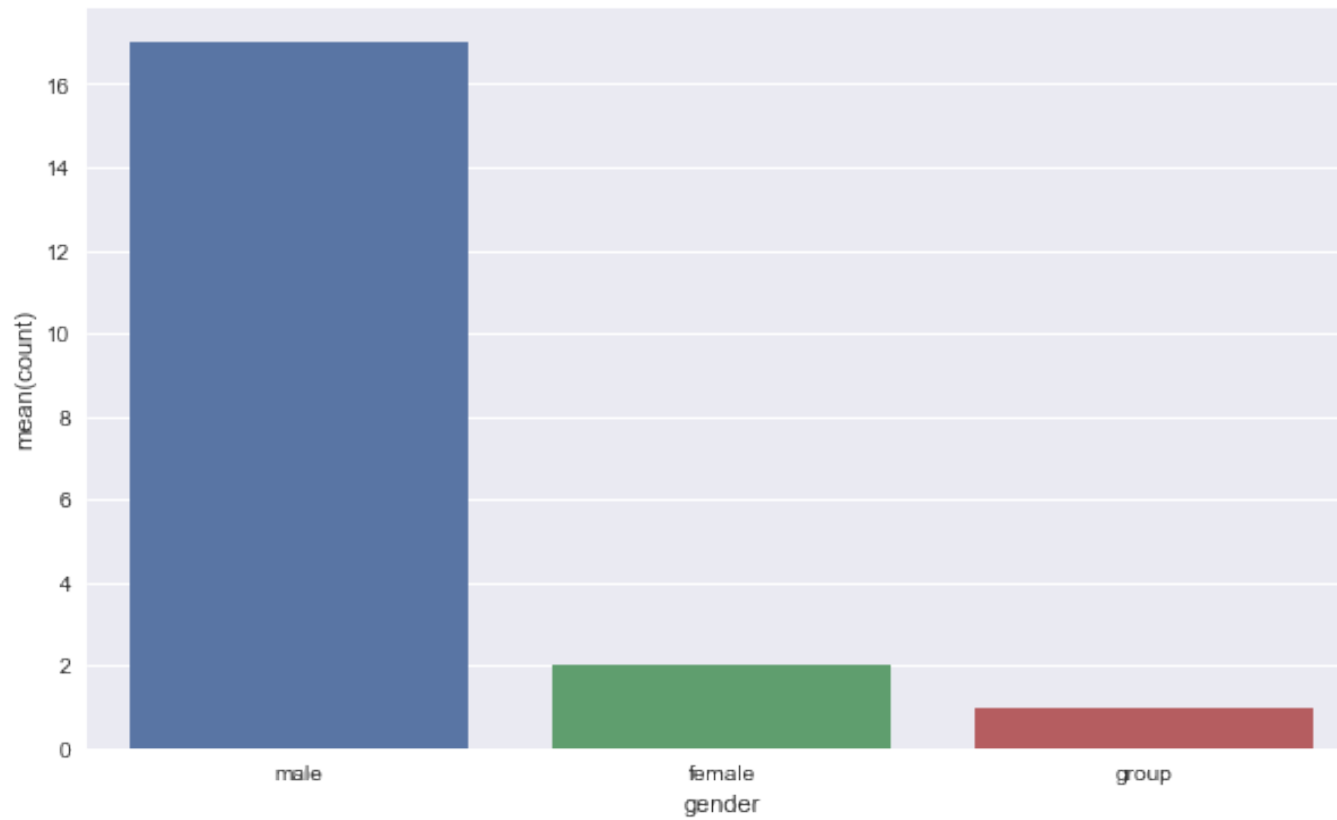


Genres ----- Rap

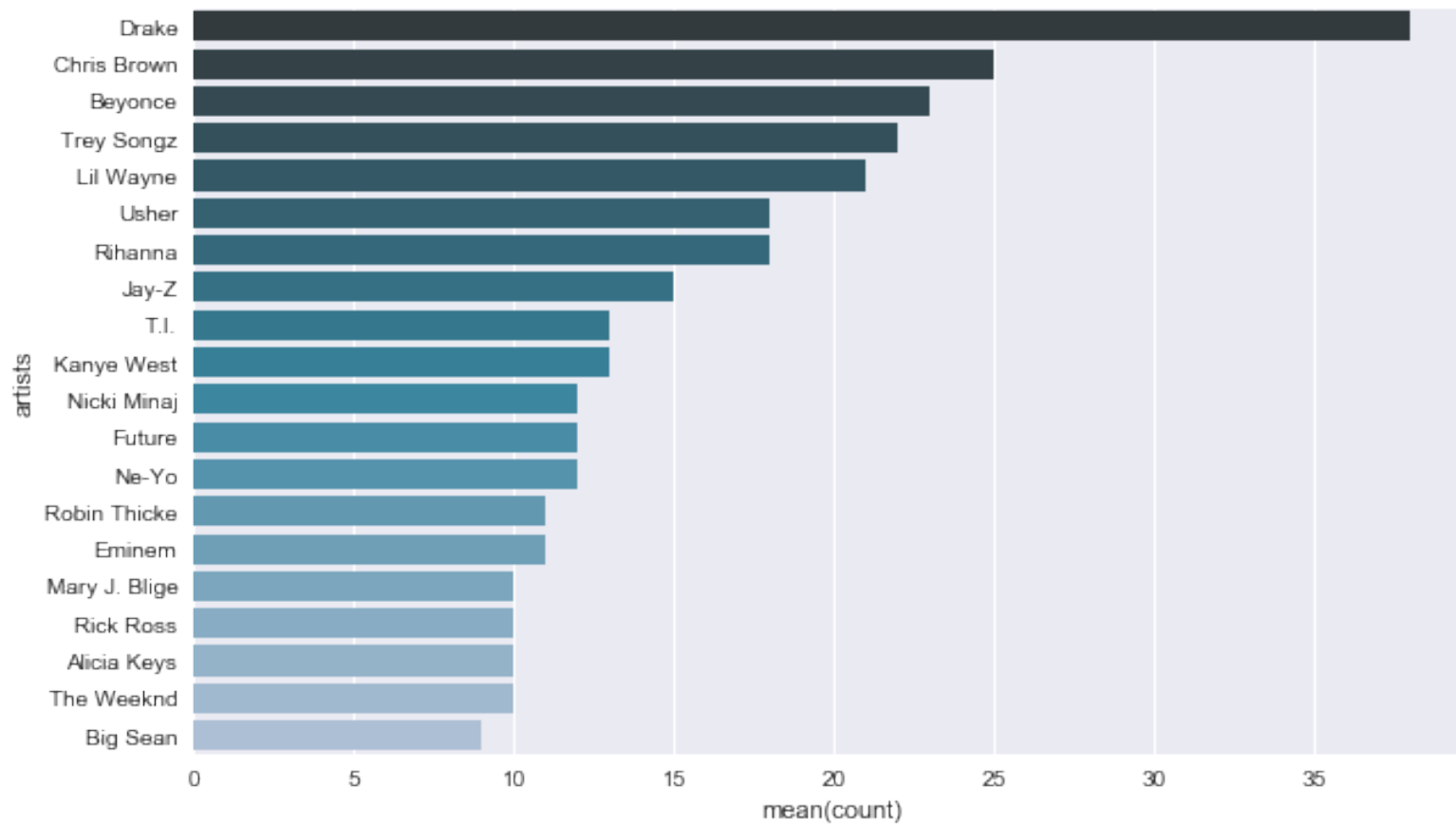




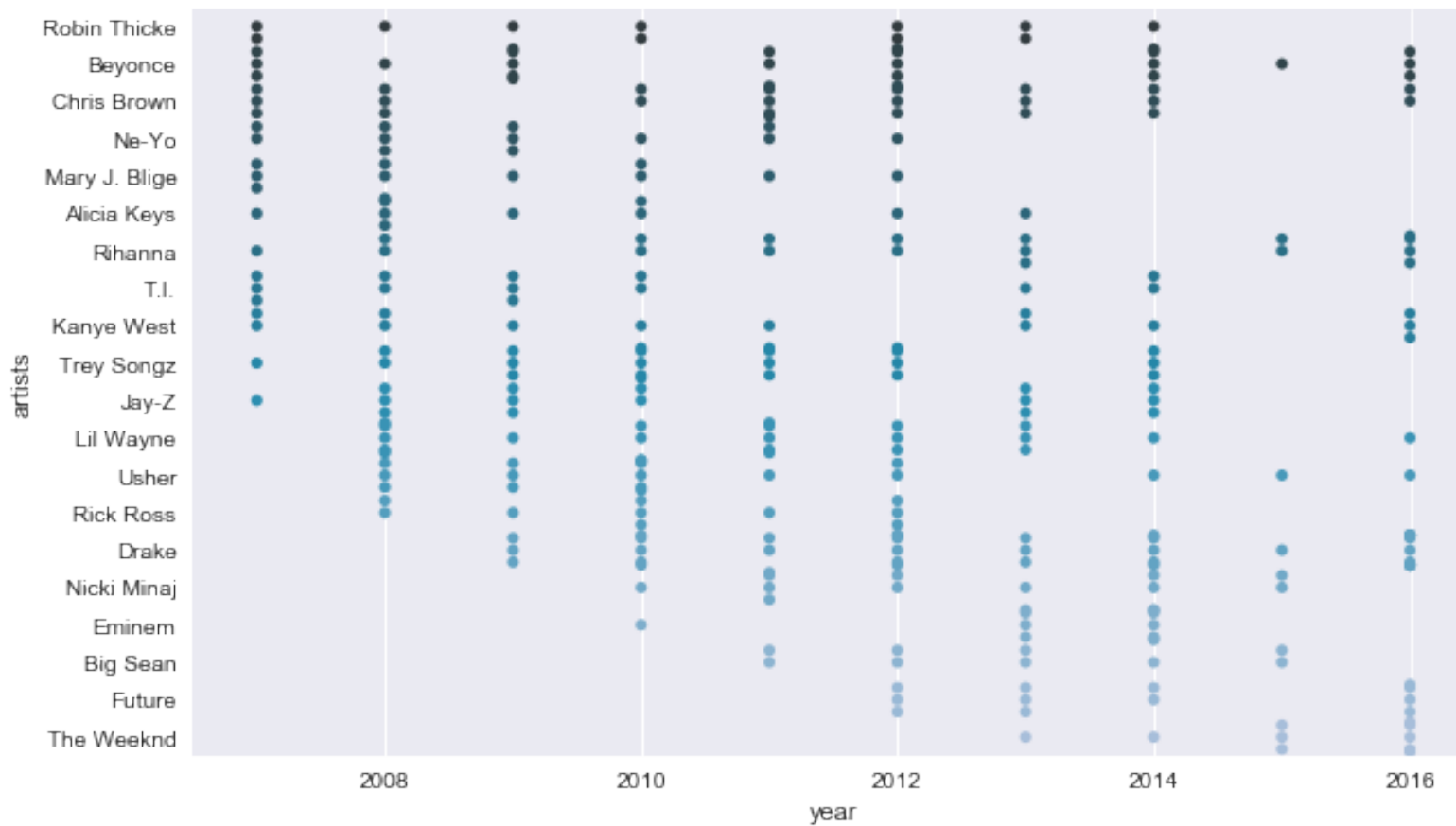
Genres ----- Rap



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



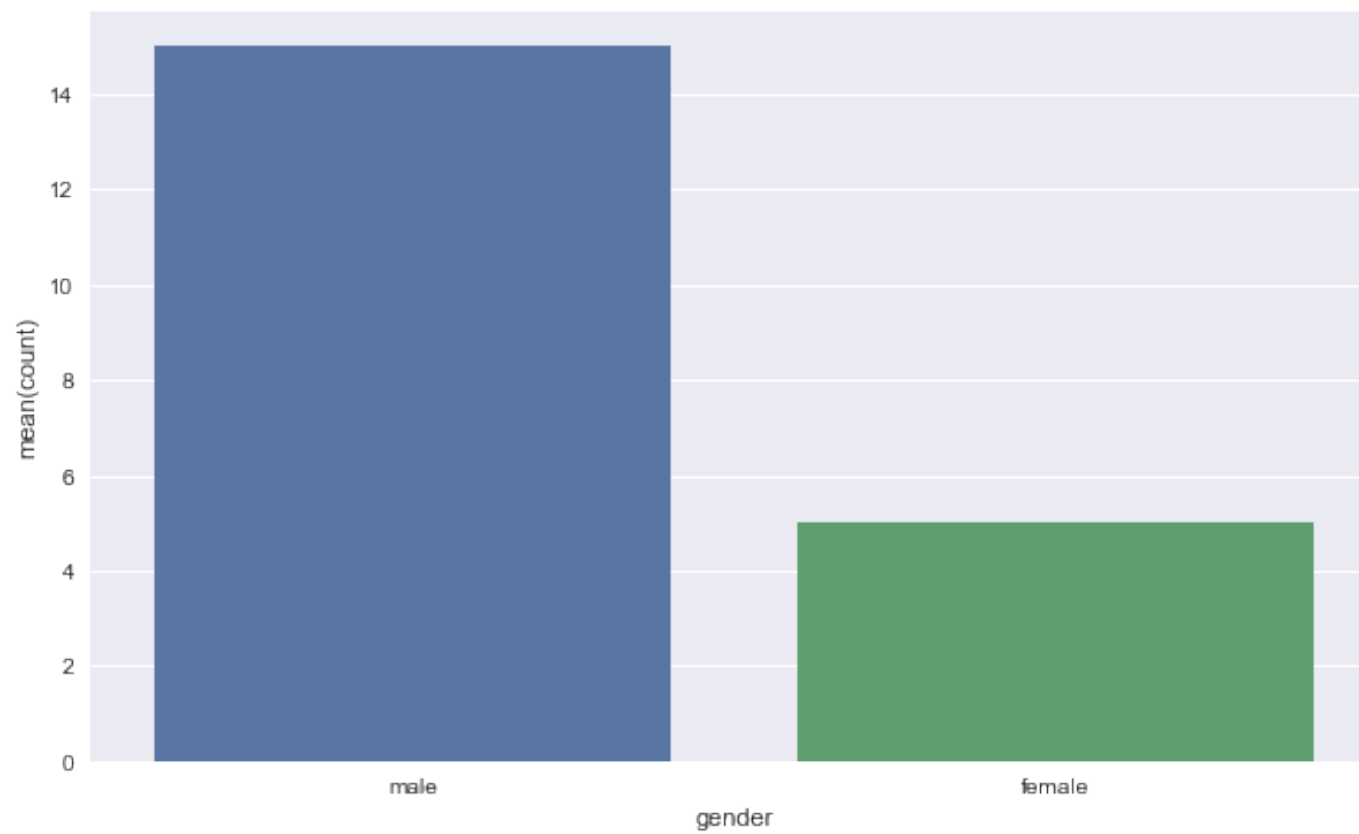
# Genres ----- R&B, Hip-Hop



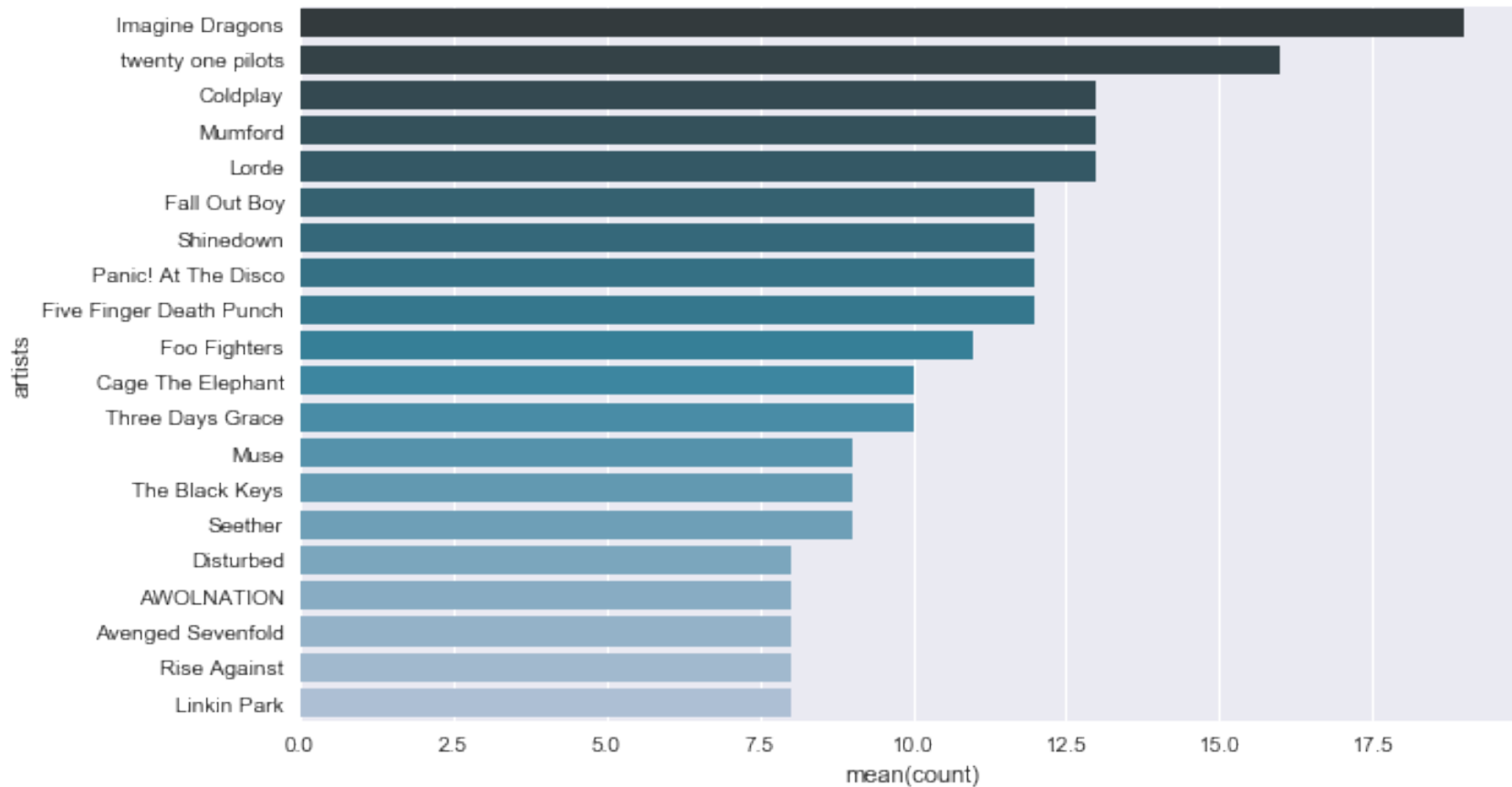
Genres ----- R&B, Hip-Hop



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



# Genres ----- ROCK



Genres ----- ROCK

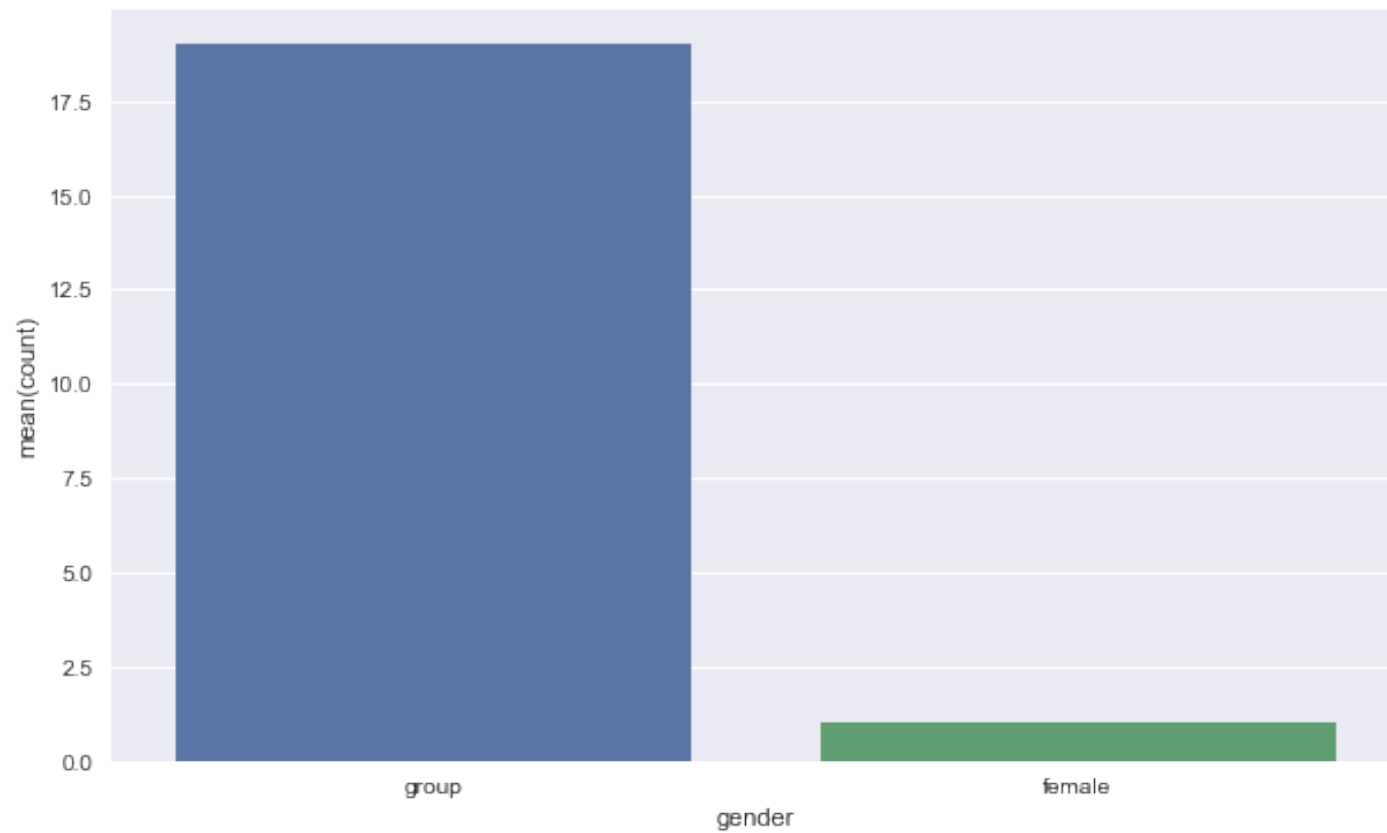


Genres ----- ROCK

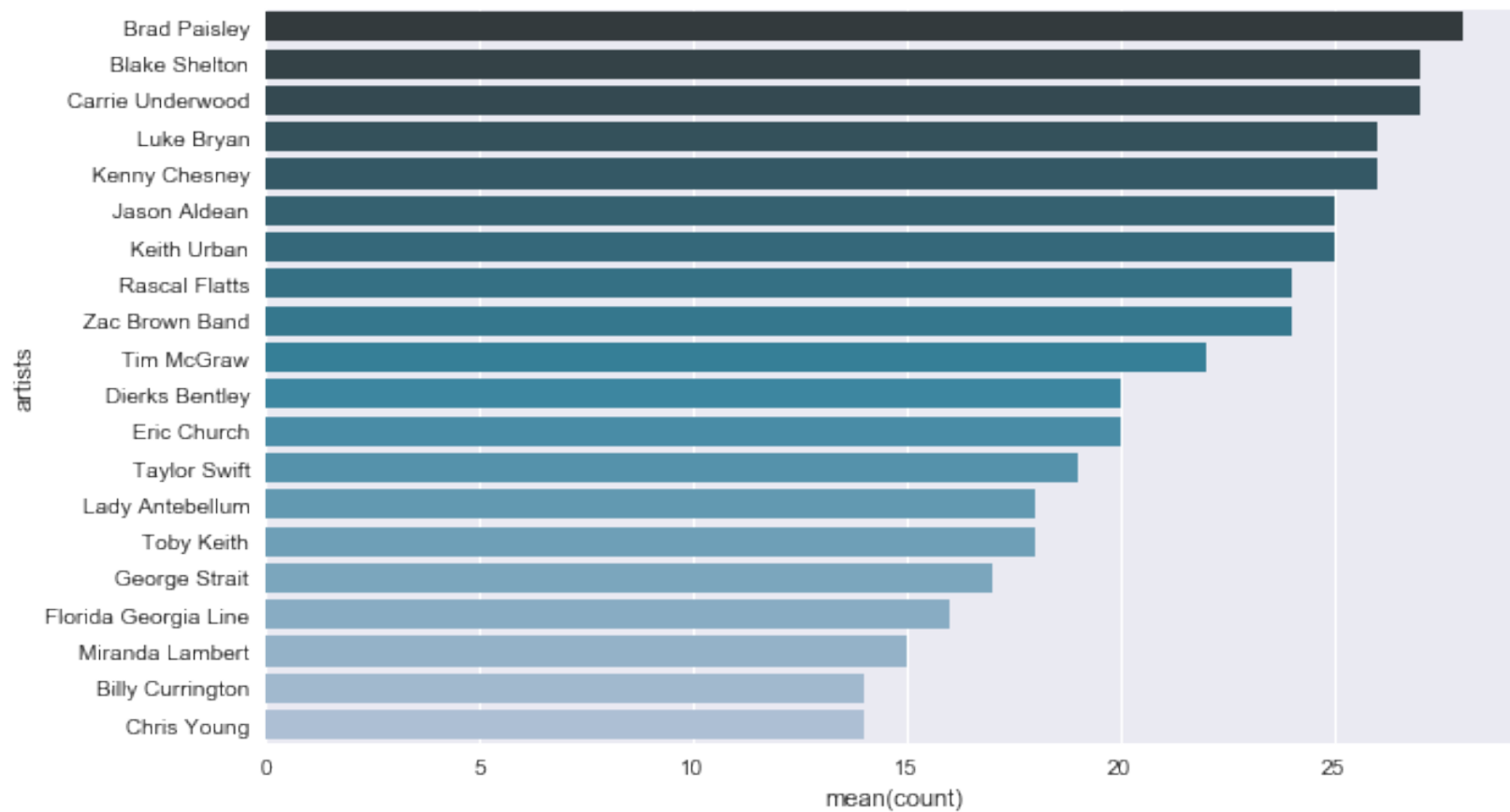




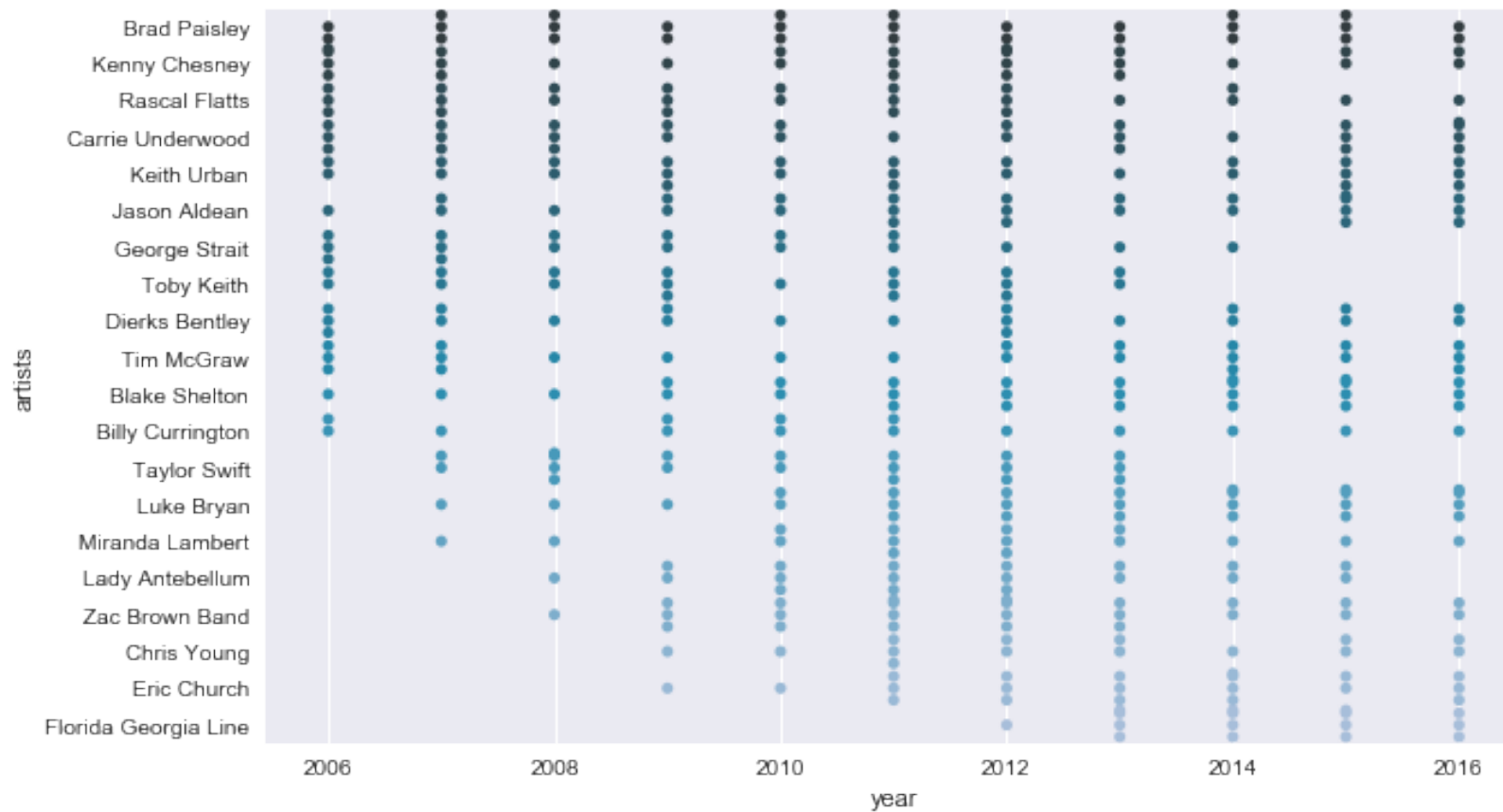
Genres ----- ROCK



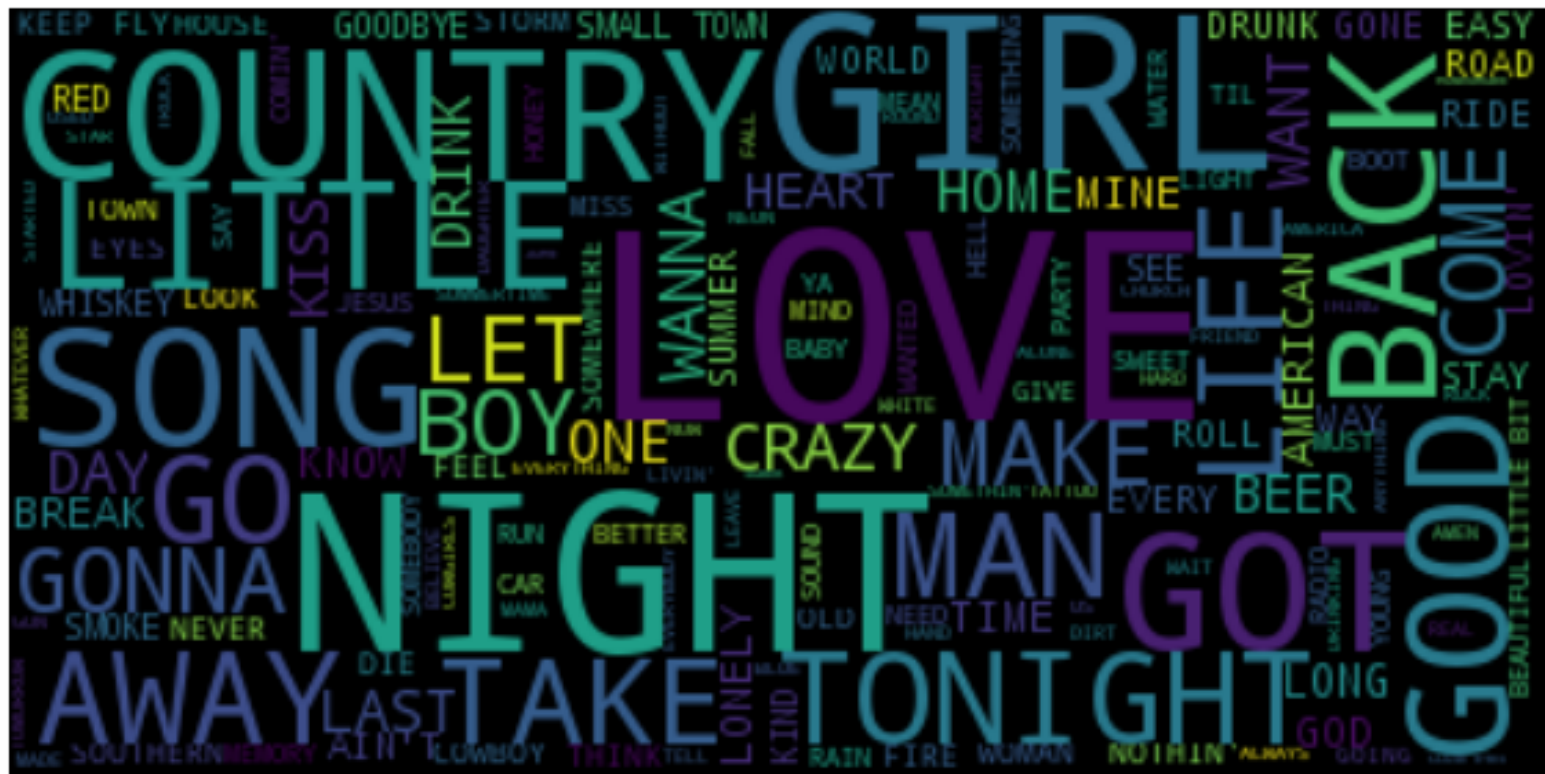
# Genres ----- Country



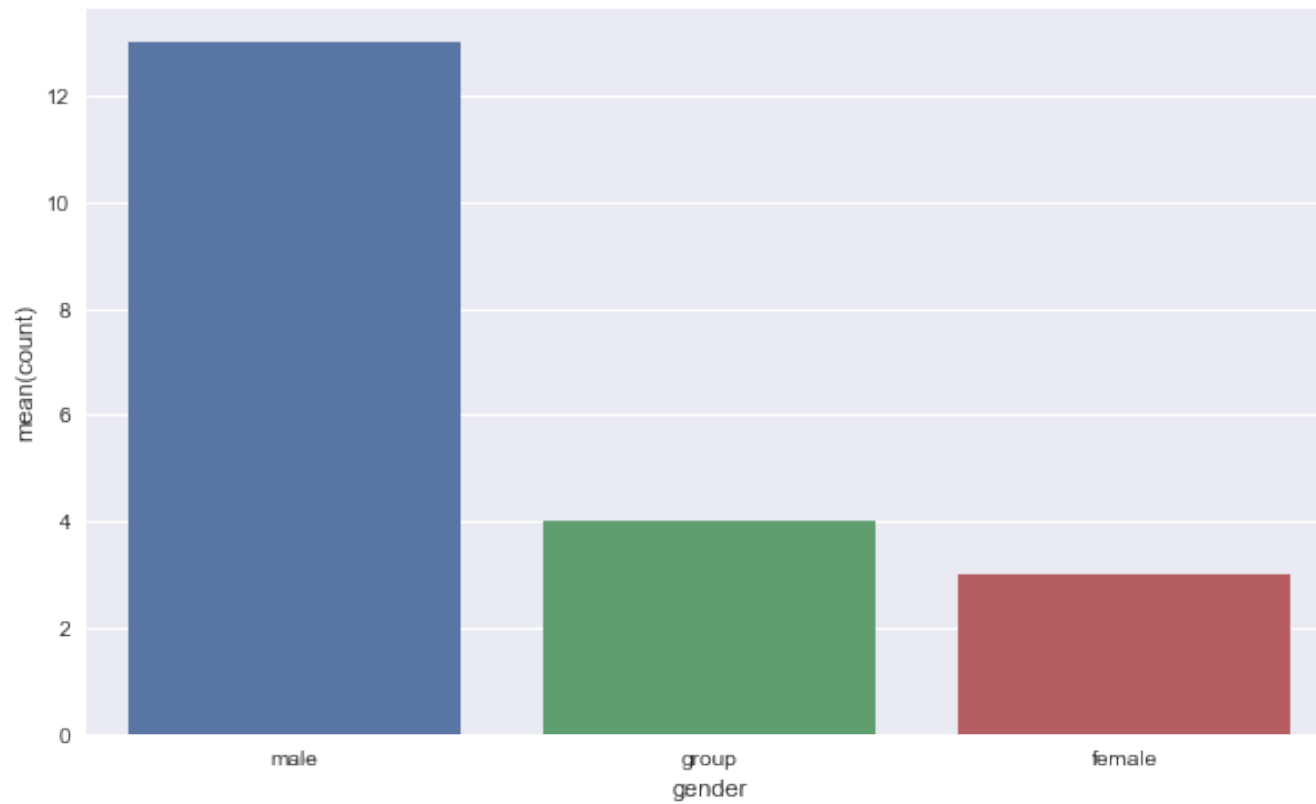
Genres ----- Country



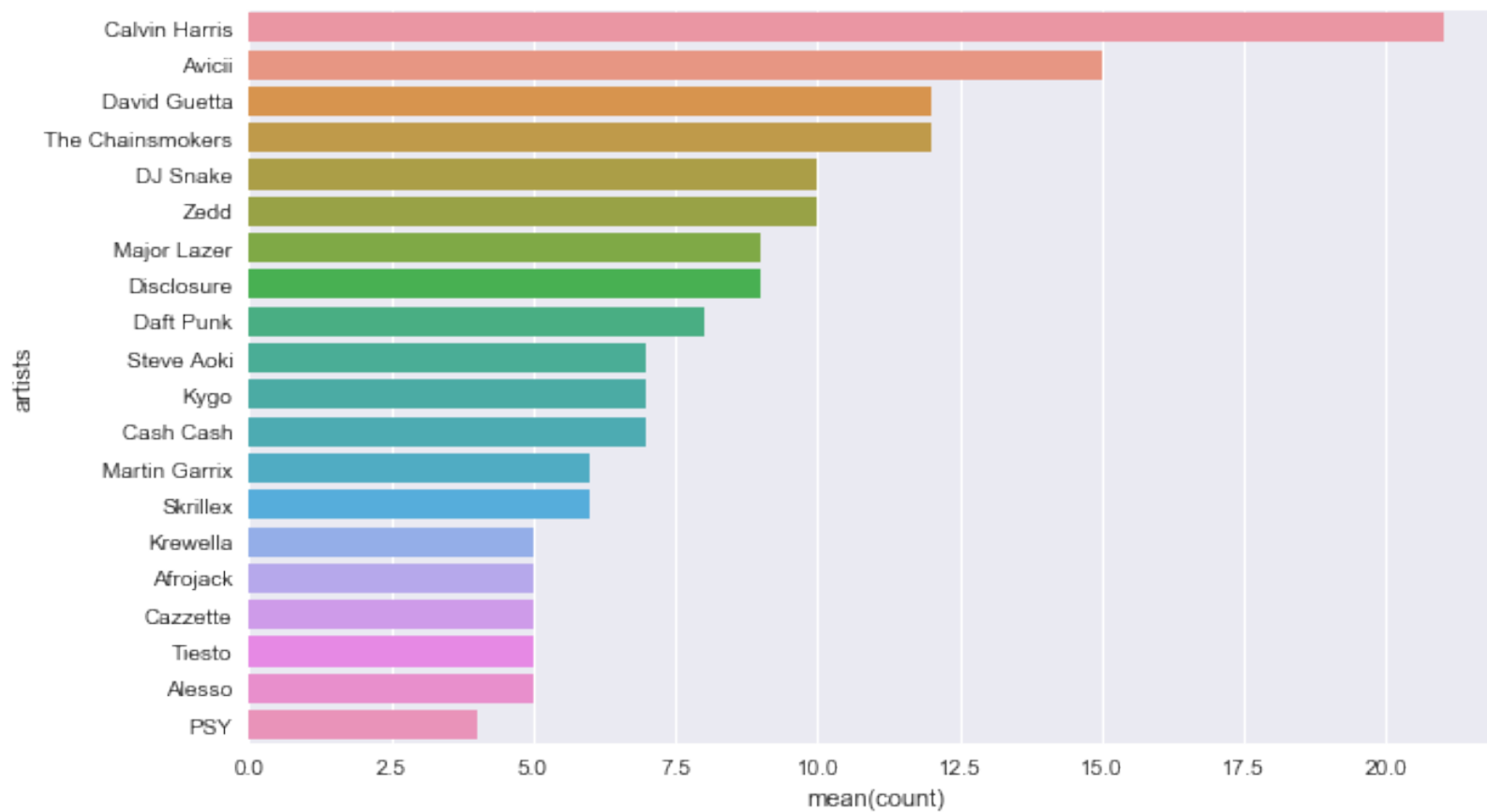
Genres ----- Country



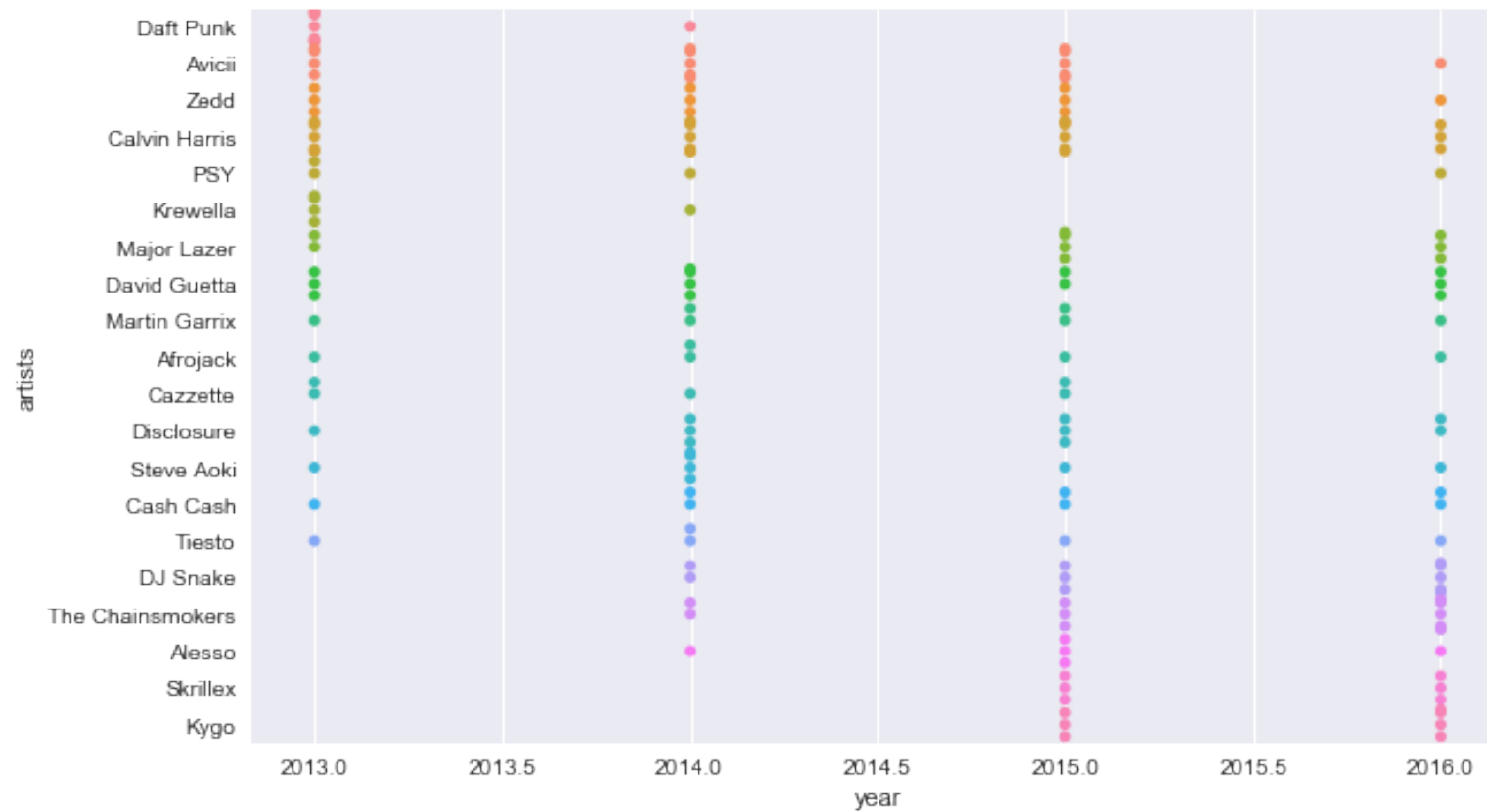
Genres ----- Country



# Genres ----- EDM



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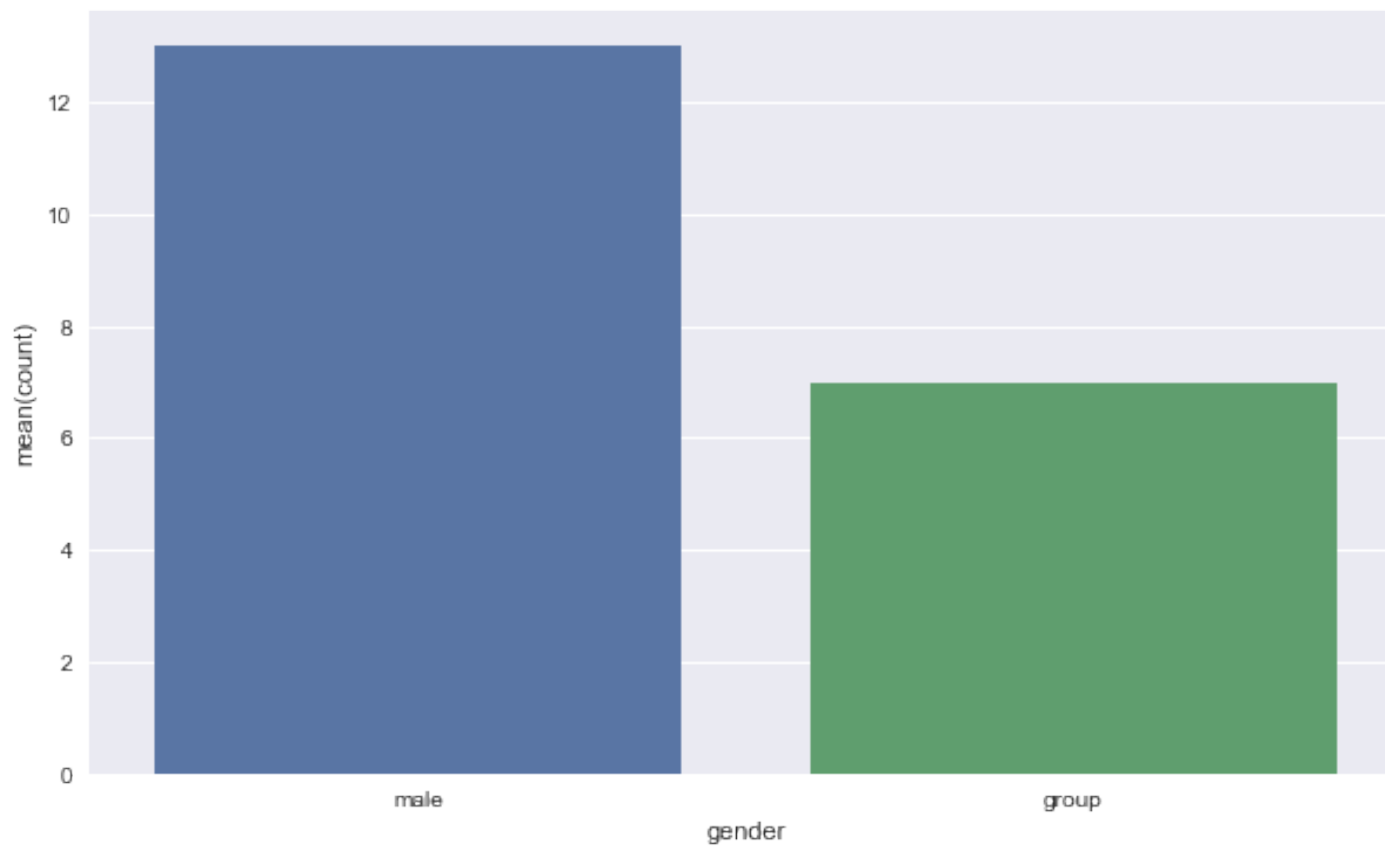


Genres ----- EDM

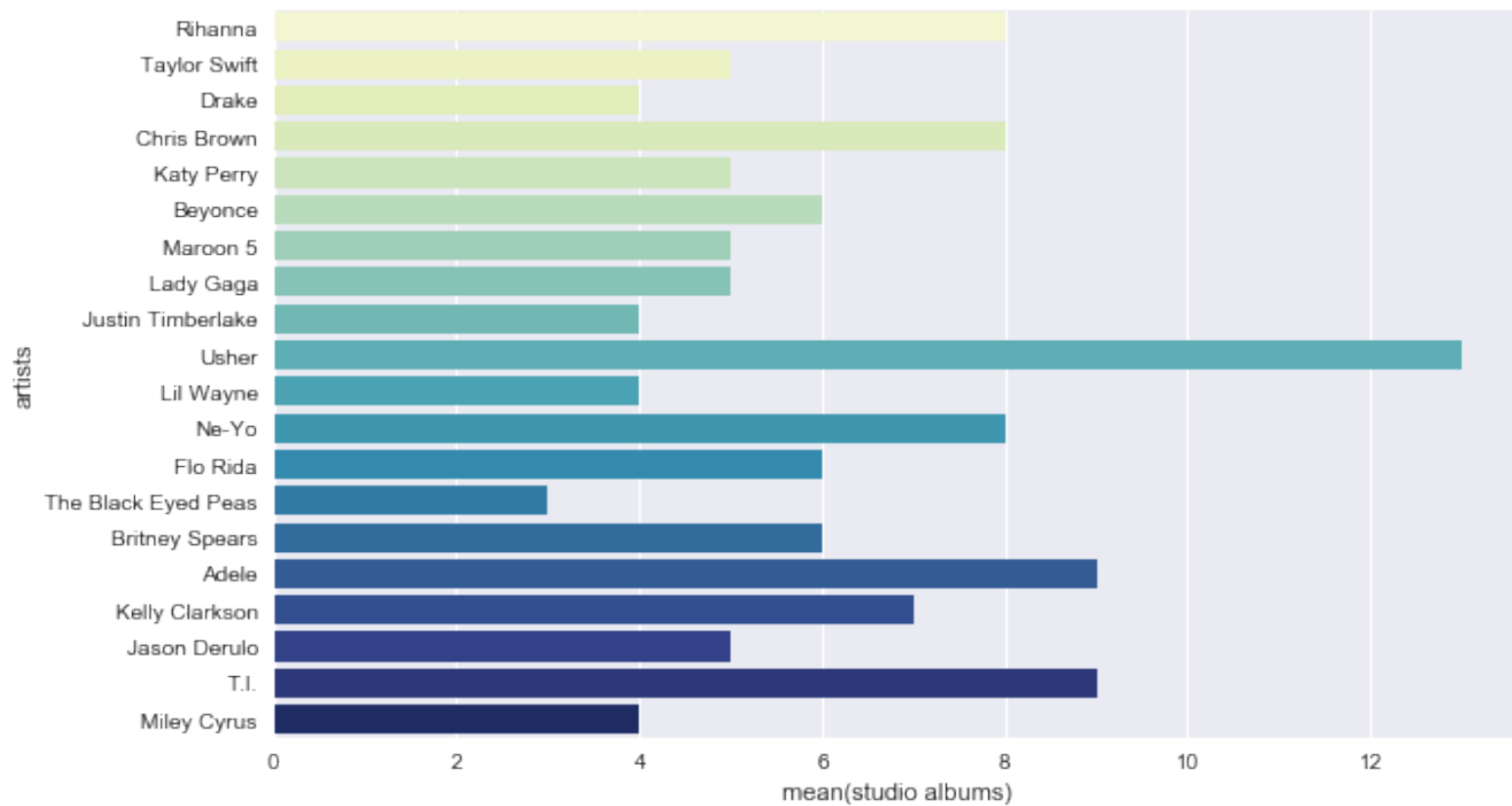




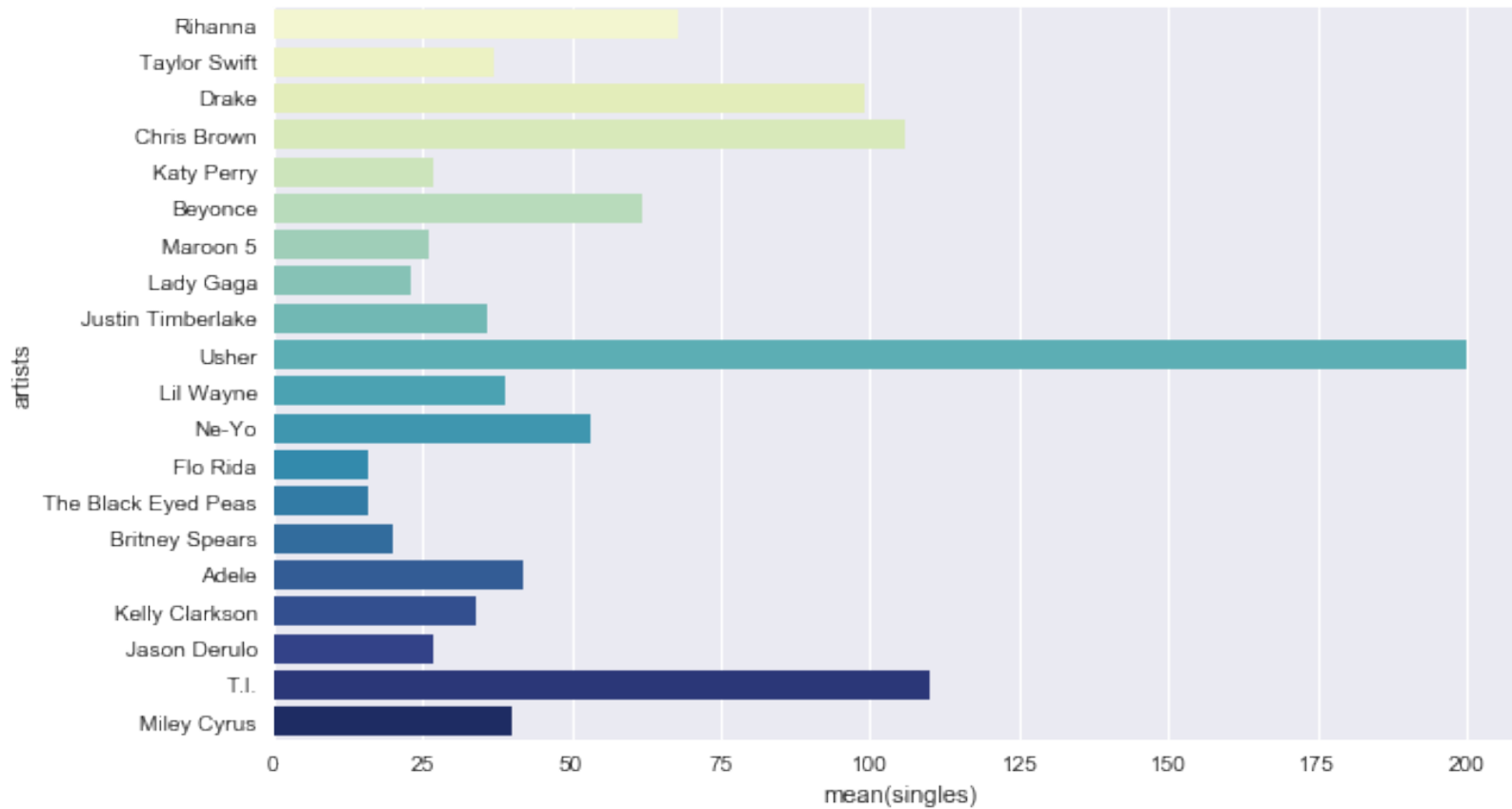
Genres ----- EDM



# 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

- 1<sup>st</sup> Billboard logo:  
[https://commons.wikimedia.org/wiki/File:Billboard\\_logo.svg](https://commons.wikimedia.org/wiki/File:Billboard_logo.svg)
- 2<sup>nd</sup> Billboard logo:  
[https://commons.wikimedia.org/wiki/File:Billboard\\_Hot\\_100\\_logo.jpg](https://commons.wikimedia.org/wiki/File:Billboard_Hot_100_logo.jpg)