

# What makes a playlist successful?

Andreas Born



How to define success?

# How to define success?

## Number of active users in the last month

- *What makes a playlist **attractive to many users**?*
- Playlists with larger reach improve the experience of more users on Spotify

# How to think about success?

## Number of active users in the last month

- *What makes a playlist **attractive to many users**?*
- Playlists with larger reach improve the experience of more users on Spotify

## Share of active users who return to a playlist

- *What share of users from last month comes back this month?*
- Users who stay with a playlist probably stay on Spotify

# How to think about success?

## Number of active users in the last month

- *What makes a playlist **attractive to many users**?*
- Playlists with larger reach improve the experience of more users on Spotify

## Users that active return to the playlist

- *What share of users from last month comes back this month?*
- Users who stay with a playlist probably stay on Spotify

# Data

- Around 400 000 playlists from the US
  - At least 2 active users (> 30 sec.) in previous month
  - 20 % have above 5 users (~80 000 lists)

# Data

- Around 400 000 playlists from the US
  - At least 2 active users (> 30 sec.) in previous month
  - **20 % have above 5 users (~80 000 lists)**
- Spotify's lists are very successful
  - 399 lists
  - 51 900 monthly users on average
  - 70% of all lists above 5 000 monthly users are from Spotify
  - **I exclude them from the analysis!**

# Focus



# Focus

## **Title of a playlist**

- *The first thing users see of a playlist*
- *Potentially interesting for search*

## **Diversity of content**

- *Correlates with retention*

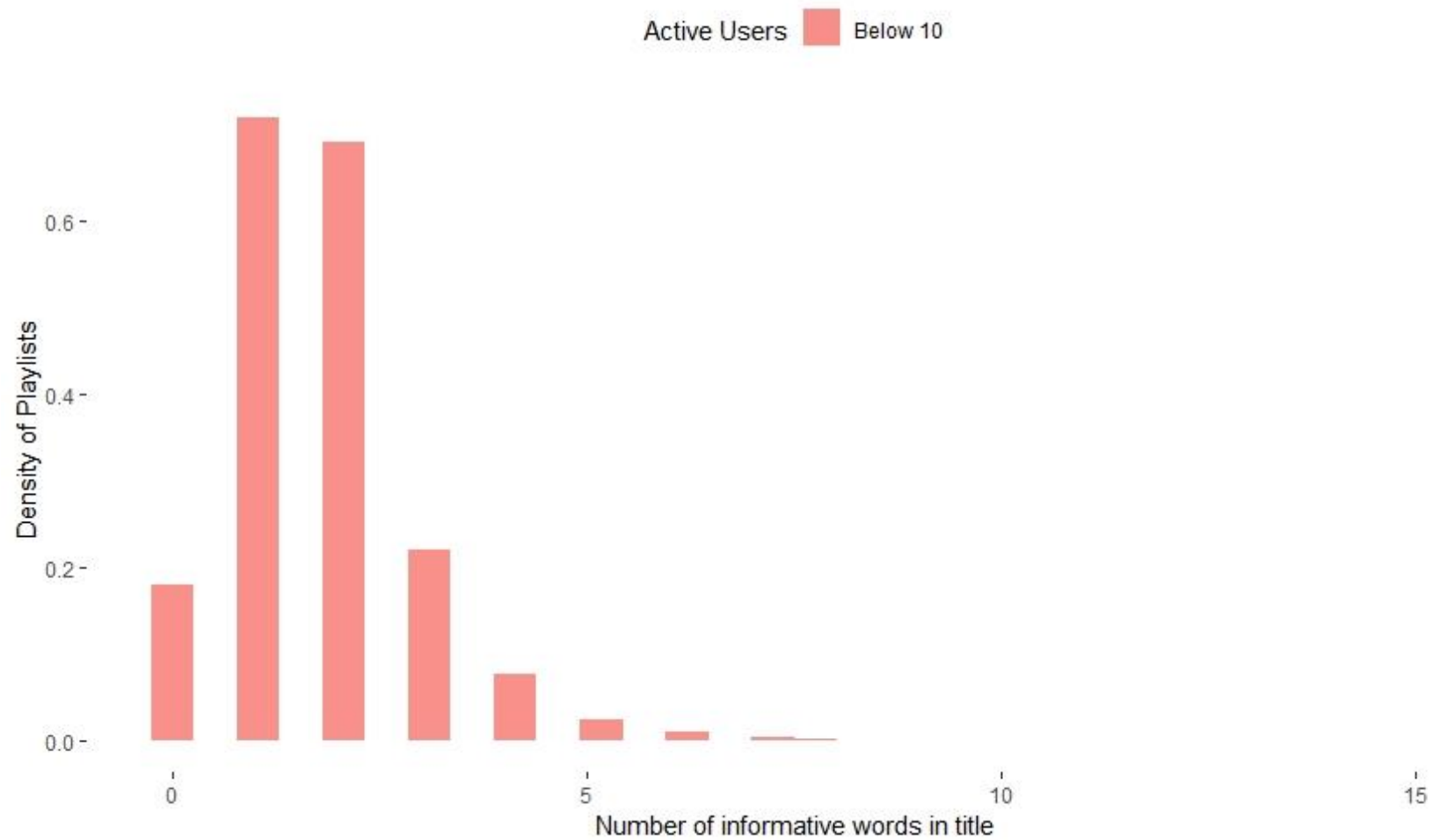
# An informative title is important

## 1. Number of *informative words* in the title

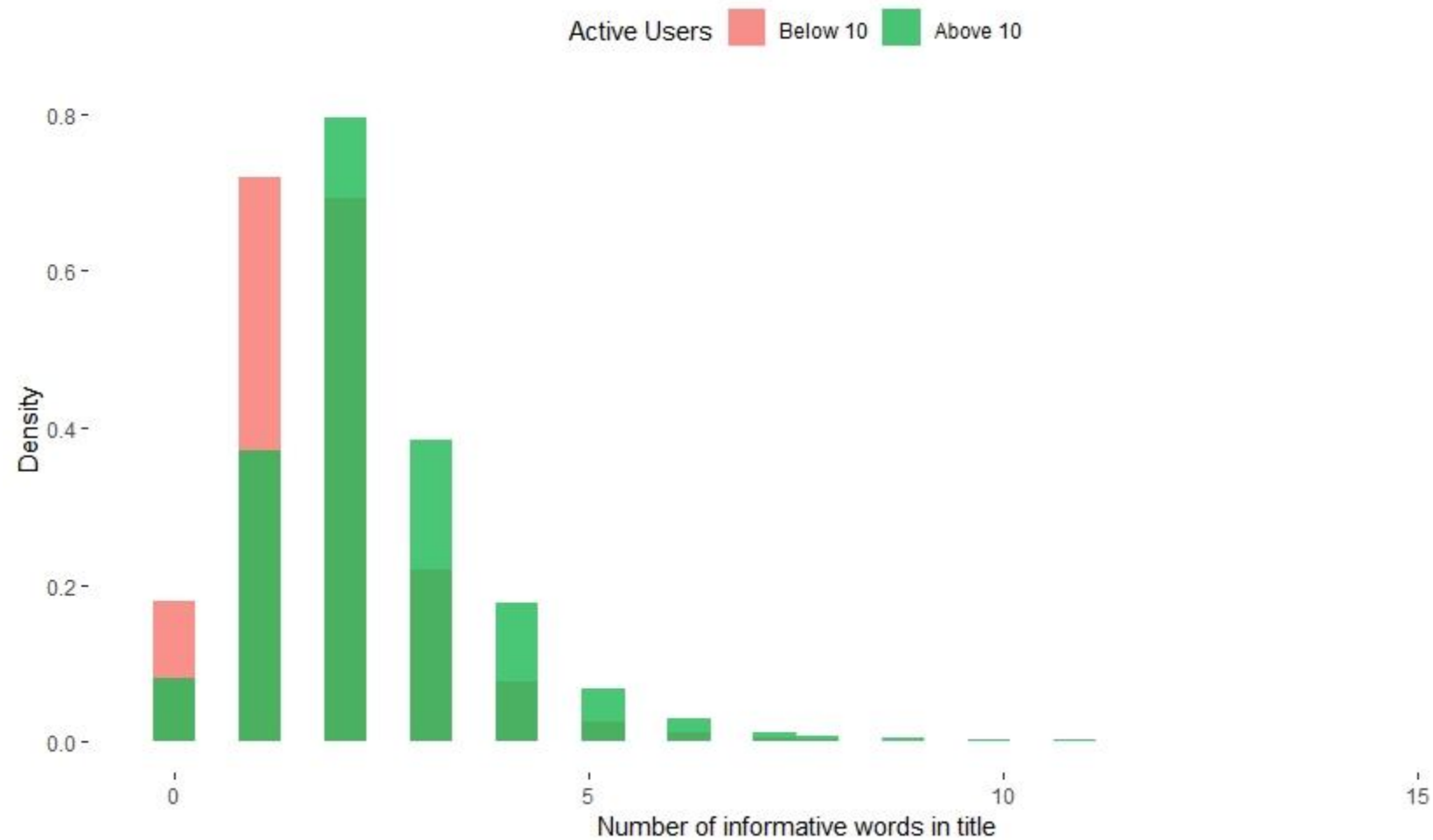
- Most Playlists have 0-3 words
- **More words correlated with more users**
- For intermediate size lists

⇒ *suggests: Playlists need to describe what distinguishes them*

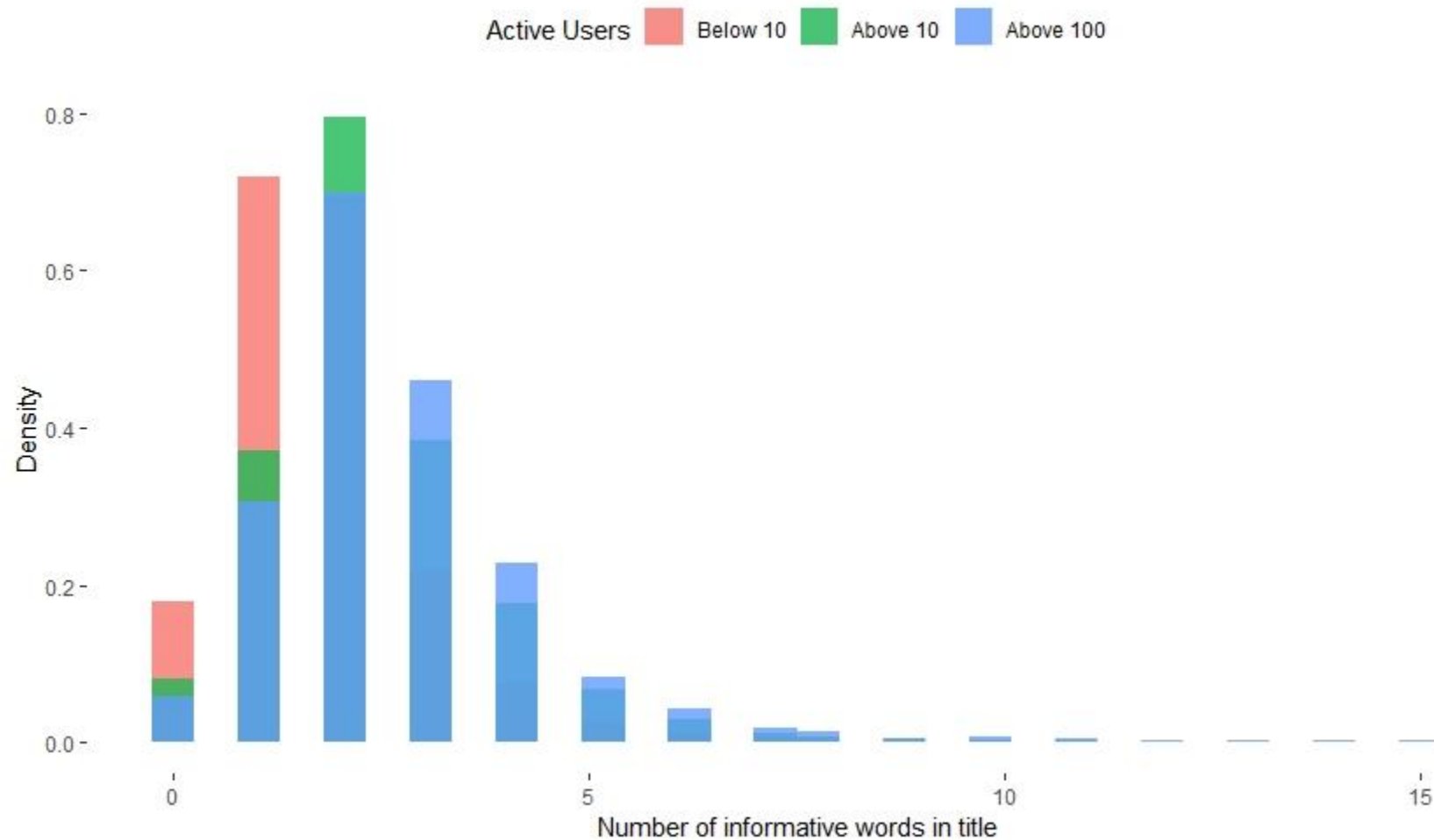
# Length of the title



# Length of the title



# Length of the title



# An informative title is important

1. Number of ***informative words*** in the title
  - Most Playlists have 0-3 words
  - More words correlated with more users

⇒ *Playlists need to describe what distinguishes them*
2. Title ***content***
  - Mentions the main genre(s)
  - Mentions an artist

# An informative title is important

## 1. Number of **informative words** in the title

- Most Playlists have 0-3 words
- More words correlated with more users

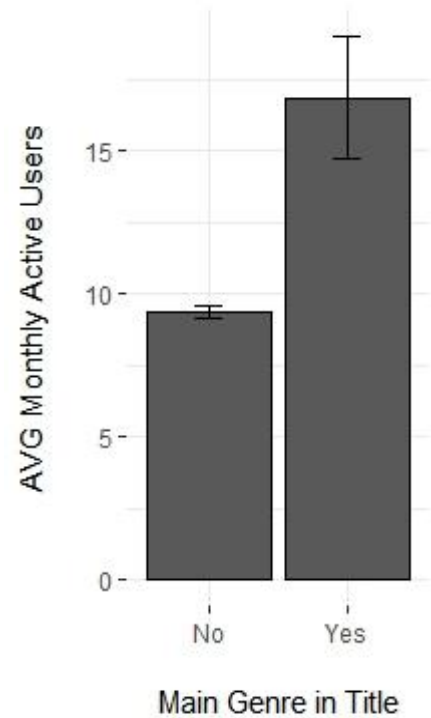
⇒ *Playlists need to describe what distinguishes them*

## 2. Title **content**

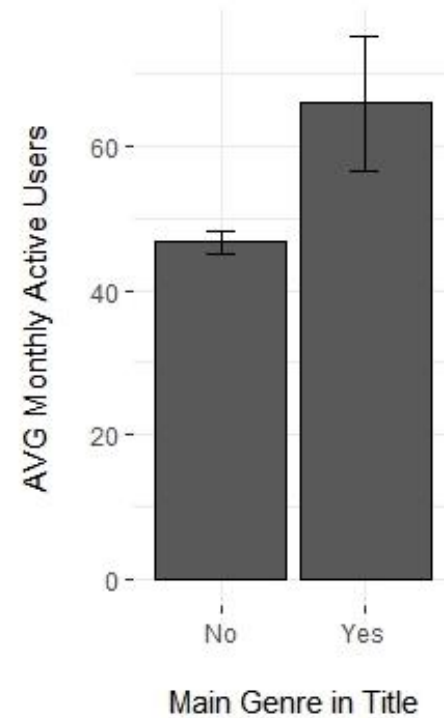
- Mentions the main genre(s)
- Mentions an artist

⇒ *Playlists need to describe their content to become found!*

# Titles that mention content do better!



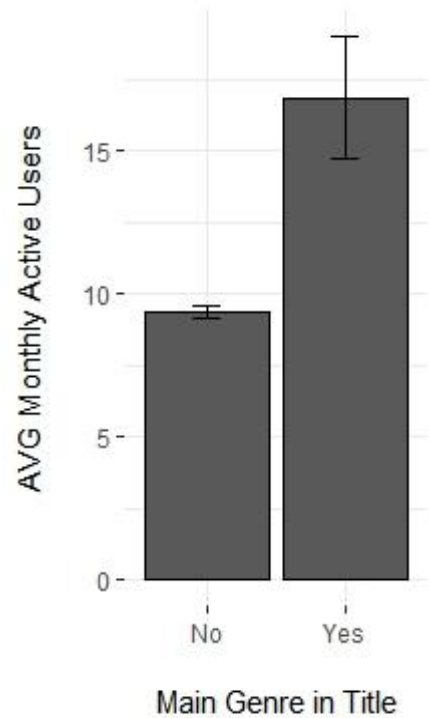
all playlists



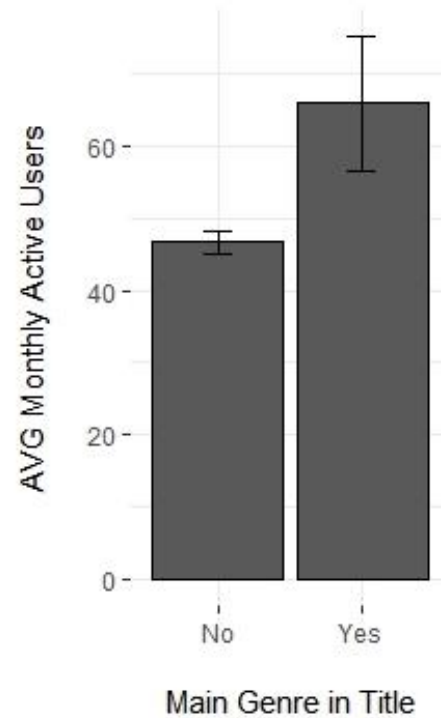
MAU > 5



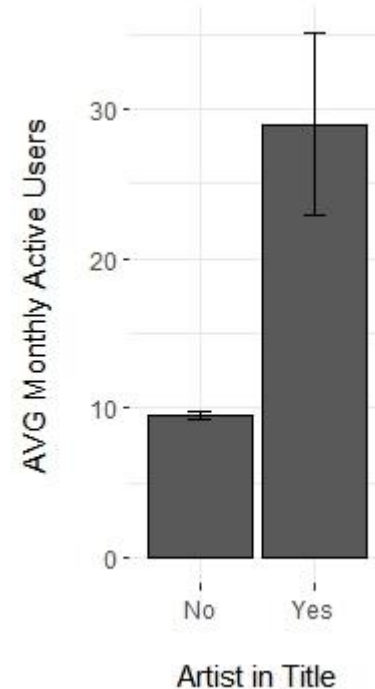
# Titles that mention content do better!



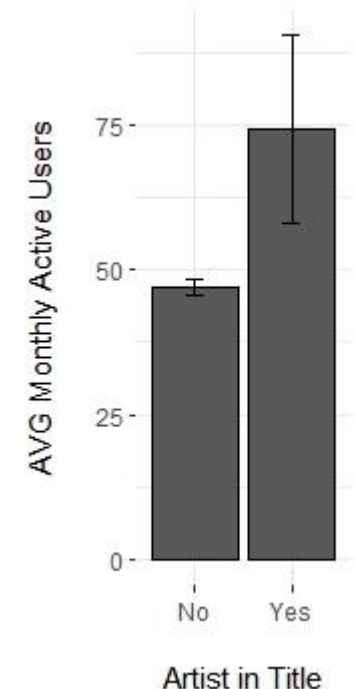
all playlists



MAU > 5



all playlists



MAU > 5

# Insight

- Titles important to *make playlist content visible to users*
  - Particularly for smaller lists
  - Informs users about content
  - Potentially: How does content differ from other lists?

*=> Spotify can help users find more user-created playlists!*

# Diversity important for retention

*Retention* of playlists significantly correlated with

- number of albums
- number of artists

within a playlist (given a number of tracks)

=> *Suggest users might also care about diversity **across playlists***

# Insight

- Titles important to *make playlist content visible to users*
  - Particularly for smaller lists
  - Informs users about content
  - Potentially: How does content differ from other lists?
- **Diversity** (albums and artists) makes users *return* to playlists

*=> Spotify can help users find more playlists!*

# Ideas

- Enhance search for user created playlists:
  - Allow *search by genre combinations*
  - Enable users to *search playlists similar to an artist*
  - Potentially create a 'user-playlist' marketplace

# Thanks for listening!

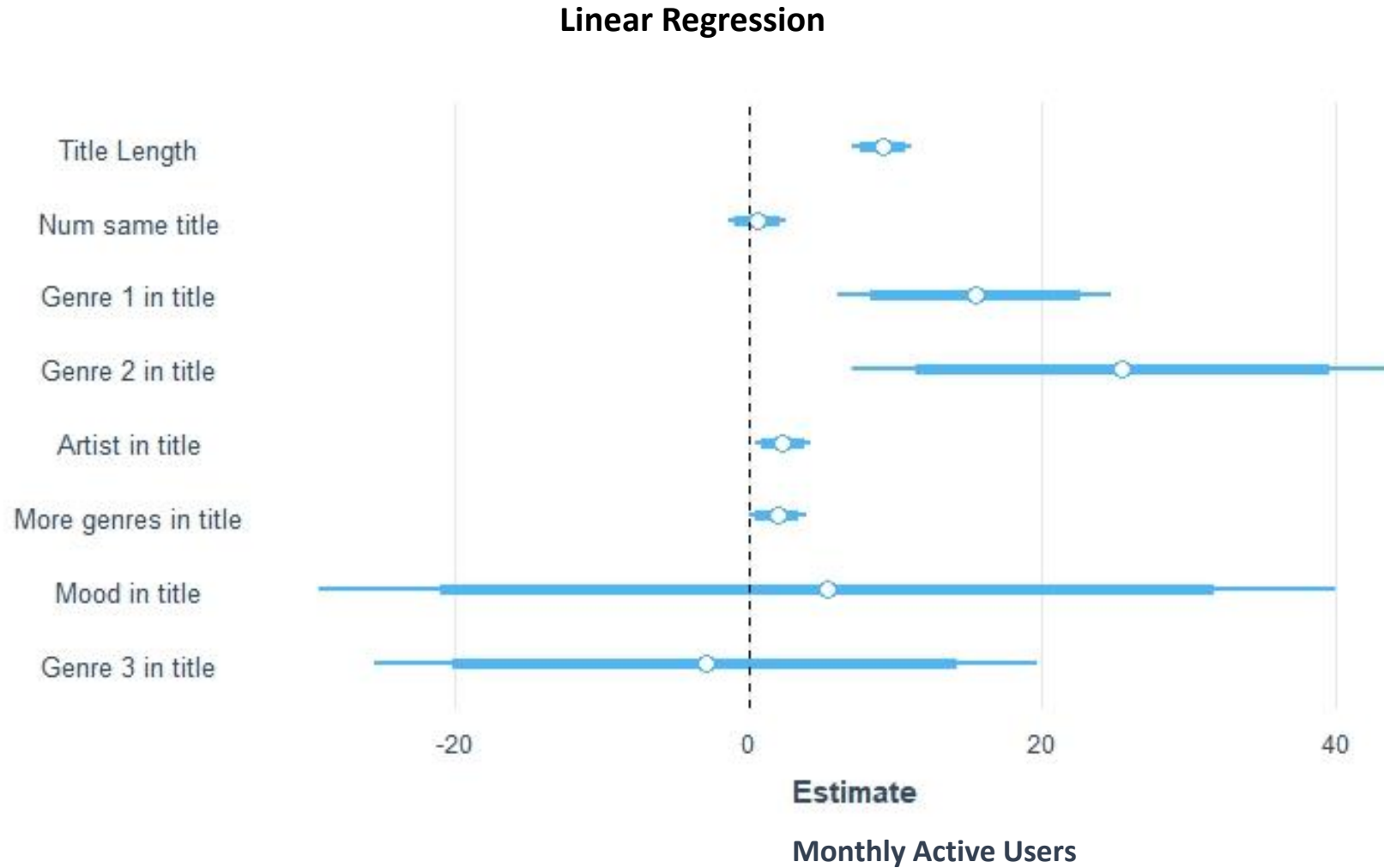
Disclaimer: Exploratory analysis, should be tested.

More on importance  
of features:

Regression >

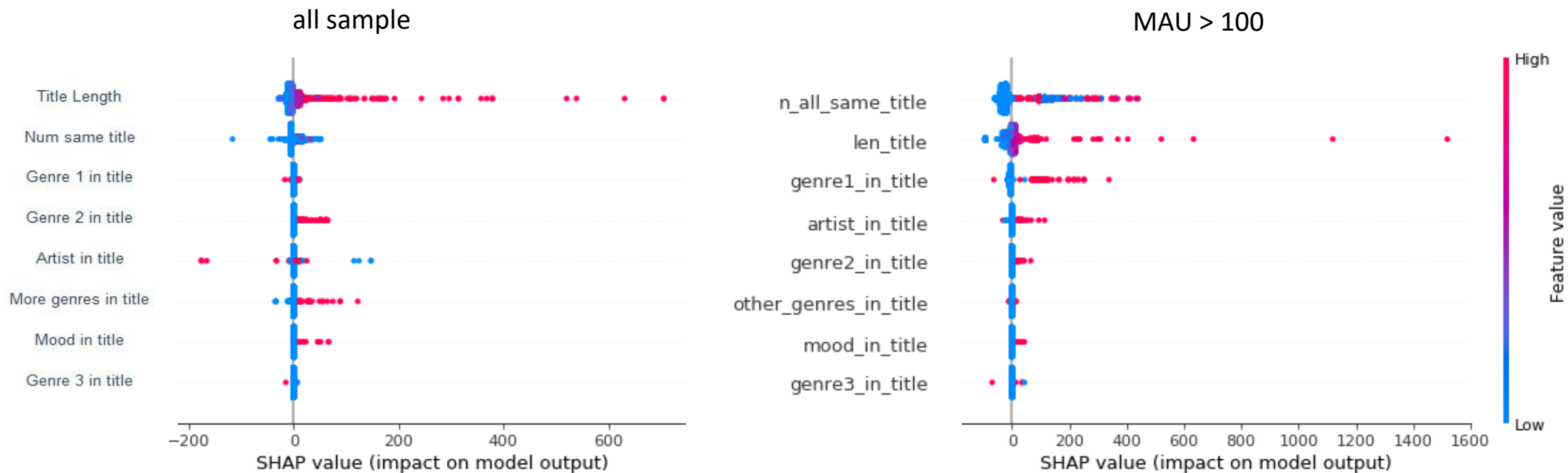
Random forest >

# Importance of factors, regression



# Importance of factors, random forest

## Random Forest





# Importance

Linear Regression			
<i>Dependent variable:</i>			
Monthly Average Users			
	All	> 5	> 100
Title Length	3.703*** (0.095)	5.628*** (0.474)	5.892 (3.953)
Artist in title	13.217*** (1.445)	18.151** (5.808)	58.130 (50.873)
Mood in title	6.206* (2.968)	5.348 (13.458)	-15.600 (128.270)
More genres in title	5.200*** (0.952)	12.170** (4.555)	-24.076 (38.373)
Genre 1 in title	5.187*** (0.702)	15.399*** (3.631)	115.070** (35.550)
Genre 2 in title	8.281*** (1.439)	25.484*** (7.174)	56.887 (59.180)
Genre 3 in title	0.644 (1.725)	-3.015 (8.779)	-113.370 (81.863)
Constant	2.523*** (0.208)	32.666*** (1.325)	372.325*** (13.349)
Observations	395,464	63,098	4,890

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

# Importance

Linear Regression			
	<i>Dependent variable:</i>		
	Monthly Average Users		
	All	> 5	> 100
Title Length	3.703*** (0.095)	5.628*** (0.474)	5.892 (3.953)
Artist in title	13.217*** (1.445)	18.151** (5.808)	58.130 (50.873)
Mood in title	6.206* (2.968)	5.348 (13.458)	-15.600 (128.270)
More genres in title	5.200*** (0.952)	12.170** (4.555)	-24.076 (38.373)
Genre 1 in title	5.187*** (0.702)	15.399*** (3.631)	115.070** (35.550)
Genre 2 in title	8.281*** (1.439)	25.484*** (7.174)	56.887 (59.180)
Genre 3 in title	0.644 (1.725)	-3.015 (8.779)	-113.370 (81.863)
Constant	2.523*** (0.208)	32.666*** (1.325)	372.325*** (13.349)
Observations	395,464	63,098	4,890

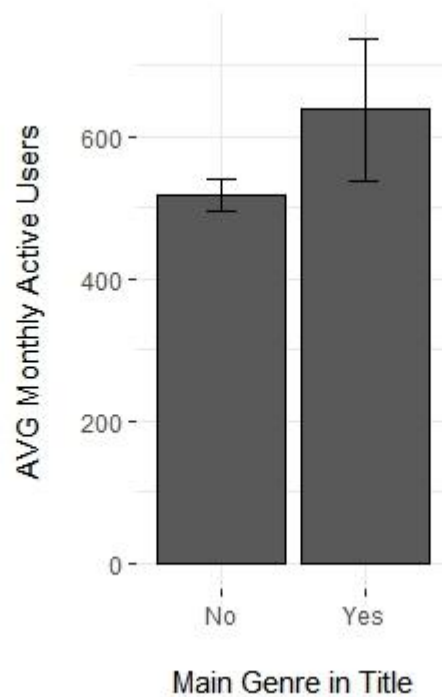
\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

# Importance

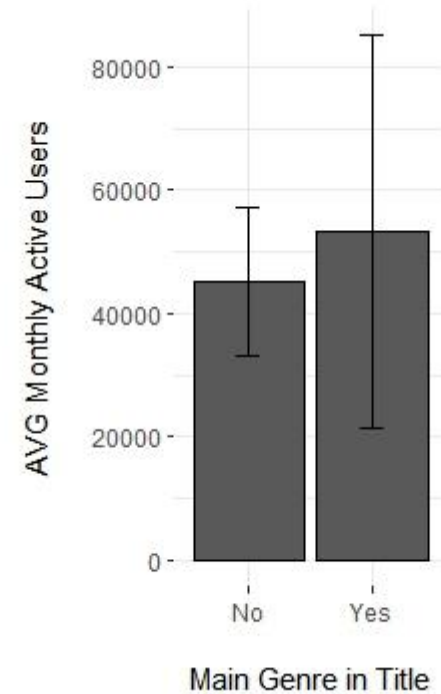
Linear Regression			
	<i>Dependent variable:</i>		
	Monthly Average Users		
	All	> 5	> 100
Title Length	3.703*** (0.095)	5.628*** (0.474)	5.892 (3.953)
Artist in title	13.217*** (1.445)	18.151** (5.808)	58.130 (50.873)
Mood in title	6.206* (2.968)	5.348 (13.458)	-15.600 (128.270)
More genres in title	5.200*** (0.952)	12.170** (4.555)	-24.076 (38.373)
Genre 1 in title	5.187*** (0.702)	15.399*** (3.631)	115.070** (35.550)
Genre 2 in title	8.281*** (1.439)	25.484*** (7.174)	56.887 (59.180)
Genre 3 in title	0.644 (1.725)	-3.015 (8.779)	-113.370 (81.863)
Constant	2.523*** (0.208)	32.666*** (1.325)	372.325*** (13.349)
Observations	395,464	63,098	4,890

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

# Mentioning genre in top playlists

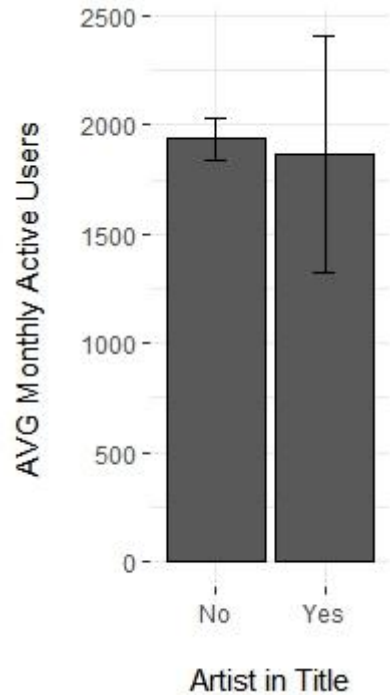


Playlists with more than 150 monthly active users *excluding top playlists*

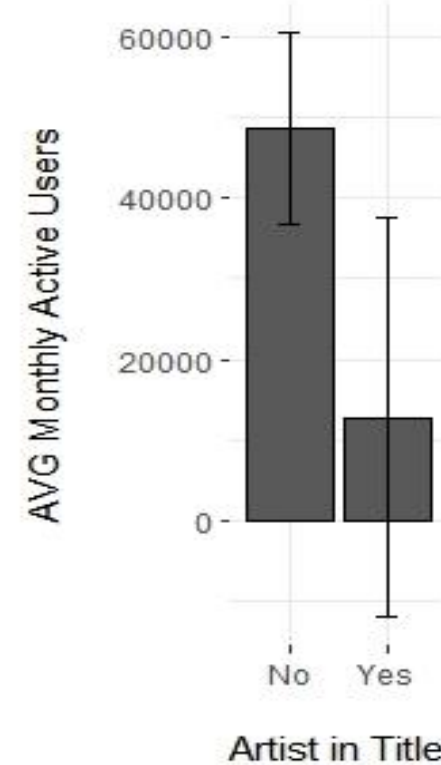


Playlists with more than 1000 monthly active users *including top playlists*

# Titles that mentions an artist



Playlists with more than 150 monthly active users *excluding top playlists*



Playlists with more than 1000 monthly active users *including top playlists*

# A good title is important to get users

- Number of *informative words* in the title
  - Most Playlists have 0-3 words
  - **More words correlated with more users**
- Title mentions **main genre** or more
- Title mentions **an artist**
  - Pronounced for smaller playlists

# A good title is important to get users

- Number of *informative words* in the title
  - Most Playlists have 0-3 words
  - **More words correlated with more users**
- Title mentions **main genre** or more
- Title mentions **an artist**
  - Pronounced for smaller playlists (weaker than genre)

*=> suggests: Playlists need to describe their content to become successful!*

# Length of Title

- Title with **informative words** attracts **more users**

⇒ *Particularly relevant for small lists*

*one more word - 5 more users*



# A good title is important to get users

## 1. Number of *informative words* in the title

- Most Playlists have 0-3 words
- **More words correlated with more users**
- Except for very successful playlists (monthly users > 1000)  
⇒ *suggests: Playlists need to describe what distinguishes them*

## 2. Title mentions a genre (or more)

- **A title that mentions a genre makes playlist more likely to**
- Except for very successful playlists (monthly users > 1000)