

Variables:

song_id: 7377418x1 string

source_system_tab: 7377418x1 categorical

Values:

discover	2.1793e+06
explore	1.6795e+05
listen with	2.1227e+05
my library	3.6847e+06
notification	6185
null	6478
radio	4.767e+05
search	6.2329e+05
settings	2200
NumMissing	18371

source_screen_name: 7377418x1 categorical

Values:

Album more	4.2016e+05
Artist more	2.5243e+05
Concert	47
Discover Chart	2.1366e+05
Discover Feature	2.4425e+05
Discover Genre	82202
Discover New	15955
Explore	72342
Local playlist more	3.2282e+06
My library	75980
My library_Search	6451
Online playlist more	1.2947e+06

```
Others profile more      2.018e+05
Payment                 12
Radio                   4.7447e+05
Search                  2.9849e+05
Search Home             13482
Search Trends           13632
Self profile more       212
Unknown                 54170
NumMissing              4.148e+05
```

source_type: 7377418x1 categorical

Values:

```
album                   4.7734e+05
artist                  3038
listen-with             1.9284e+05
local-library           2.2614e+06
local-playlist          1.0795e+06
my-daily-playlist       663
online-playlist         1.9679e+06
radio                   4.8311e+05
song                    2.4472e+05
song-based-playlist     2.1053e+05
top-hits-for-artist     4.2361e+05
topic-article-playlist  11194
NumMissing              21539
```

target: 7377418x1 double

Values:

```
Min      0
Median   1
Max      1
```

Variables:

song_id: 2296320×1 string

song_length: 2296320×1 double

Values:

Min	185
Median	2.2663e+05
Max	1.2174e+07

genre_ids: 2296320×1 double

Values:

Min	87
Median	921
Max	2245
NumMissing	266992

artist_name: 2296320×1 string

composer: 2296320×1 string

lyricist: 2296320×1 string

language: 2296320×1 double

Values:

Min	-1
Median	52
Max	59
NumMissing	1

No of songs with 1,2 and 3 artists

a =

2193470	55301	32279
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No of unique artists=222363>>