

Цель: реализовать базовый анализ датасета.

Для данной практической работы был выбран датасет spotify, так я меломан

```
import pandas as pd
```

```
# Загрузка датасета
```

```
dataset = pd.read_csv("file.csv")
```

```
# Вывод датасета
```

```
dataset
```

```
      track_id \
0      6f807x0ima9a1j3VPbc7VN
1      0r7CVbZTWZgbTCYdfa2P31
2      1z1Hg7Vb0AhHdiEmnDE79l
3      75FpbthrwQmzHlBJLuGdC7
4      1e8PAfcKUYoKkxPhrHqw4x
...
32828  7bxnKAamR3snQ1VGLuVfC1
32829  5Aevni09Em4575077nkWHz
32830  7ImMqPP3Q1yfUHvsdn7wEo
32831  2m69mhnfQ10q6lGtXuYhgX
32832  29zWqhca3zt5NsckZqDf6c
```

```
      track_name
track_artist \
0      I Don't Care (with Justin Bieber) - Loud Luxur...      Ed
Sheeran
1      Memories - Dillon Francis Remix
Maroon 5
2      All the Time - Don Diablo Remix      Zara
Larsson
3      Call You Mine - Keanu Silva Remix      The
Chainsmokers
4      Someone You Loved - Future Humans Remix      Lewis
Capaldi
...
...
32828  City Of Lights - Official Radio Edit      Lush &
Simon
32829  Closer - Sultan & Ned Shepard Remix      Tegan and
Sara
32830  Sweet Surrender - Radio Edit
Starkillers
32831  Only For You - Maor Levi Remix
Mat Zo
32832  Typhoon - Original Mix      Julian
Calor
```

	track_popularity	track_album_release_date	playlist_name \
0	66	2019-06-14	Pop Remix
1	67	2019-12-13	Pop Remix
2	70	2019-07-05	Pop Remix
3	60	2019-07-19	Pop Remix
4	69	2019-03-05	Pop Remix
...	...	...	...
32828	42	2014-04-28	♥ EDM LOVE 2020
32829	20	2013-03-08	♥ EDM LOVE 2020
32830	14	2014-04-21	♥ EDM LOVE 2020
32831	15	2014-01-01	♥ EDM LOVE 2020
32832	27	2014-03-03	♥ EDM LOVE 2020

	playlist_id	playlist_genre	playlist_subgenre \
0	37i9dQZF1DXcZDD7cfEKHW	pop	dance
pop			
1	37i9dQZF1DXcZDD7cfEKHW	pop	dance
pop			
2	37i9dQZF1DXcZDD7cfEKHW	pop	dance
pop			
3	37i9dQZF1DXcZDD7cfEKHW	pop	dance
pop			
4	37i9dQZF1DXcZDD7cfEKHW	pop	dance
pop			
...	...	...	..
.			
32828	6jI1gFr6ANFtT8MmTvA2Ux	edm	progressive electro house
32829	6jI1gFr6ANFtT8MmTvA2Ux	edm	progressive electro house
32830	6jI1gFr6ANFtT8MmTvA2Ux	edm	progressive electro house
32831	6jI1gFr6ANFtT8MmTvA2Ux	edm	progressive electro house
32832	6jI1gFr6ANFtT8MmTvA2Ux	edm	progressive electro house

	danceability	...	key	loudness	mode	speechiness
acousticness \						
0	0.748	...	6	-2.634	1	0.0583
0.102000						
1	0.726	...	11	-4.969	1	0.0373
0.072400						
2	0.675	...	1	-3.432	0	0.0742
0.079400						
3	0.718	...	7	-3.778	1	0.1020
0.028700						
4	0.650	...	1	-4.672	1	0.0359

```

0.080300
...
..
32828      0.428    ...    2    -1.814    1    0.0936
0.076600
32829      0.522    ...    0    -4.462    1    0.0420
0.001710
32830      0.529    ...    6    -4.899    0    0.0481
0.108000
32831      0.626    ...    2    -3.361    1    0.1090
0.007920
32832      0.603    ...    5    -4.571    0    0.0385
0.000133

      instrumentality liveness valence tempo duration_ms
0          0.000000    0.0653   0.5180  122.036    194754
1          0.004210    0.3570   0.6930   99.972    162600
2          0.000023    0.1100   0.6130  124.008    176616
3          0.000009    0.2040   0.2770  121.956    169093
4          0.000000    0.0833   0.7250  123.976    189052
...
32828      0.000000    0.0668   0.2100  128.170    204375
32829      0.004270    0.3750   0.4000  128.041    353120
32830      0.000001    0.1500   0.4360  127.989    210112
32831      0.127000    0.3430   0.3080  128.008    367432
32832      0.341000    0.7420   0.0894  127.984    337500

[32833 rows x 21 columns]

```

Создаем словарь `columns_info`, который содержит информацию о столбцах Dataset. Ключами словаря являются названия столбцов, а значениями - описания или объяснения для каждого столбца.

```

columns_info = {
    "track_album_id": "Просто id",
    "track_album_name": "Просто имя",
}

dataset.columns

Index(['track_id', 'track_name', 'track_artist', 'track_popularity',
      'track_album_release_date', 'playlist_name', 'playlist_id',
      'playlist_genre', 'playlist_subgenre', 'danceability',
      'energy', 'key',
      'loudness', 'mode', 'speechiness', 'acousticness',
      'instrumentality',
      'liveness', 'valence', 'tempo', 'duration_ms'],
      dtype='object')

```

Уникальные значения. Для каждого столбца в датасете выводится информация о его уникальных значениях.

```
for col in dataset.columns:
    unique_values = dataset[col].unique()
    print(f"Уникальные значения колонки {col}: {unique_values}")

Уникальные значения колонки track_id: ['6f807x0ima9a1j3VPbc7VN'
'0r7CVbZTWZgbTCYdfa2P31'
'1z1Hg7Vb0AhHdiEmnDE79l' ... '7ImMqPP3Q1yfUHvsdn7wEo'
'2m69mhnfQ10q6lGtXuYhgX' '29zWqhca3zt5NsckZqDf6c']
Уникальные значения колонки track_name: ["I Don't Care (with Justin
Bieber) - Loud Luxury Remix"
'Memories - Dillon Francis Remix' 'All the Time - Don Diablo
Remix' ...
'Sweet Surrender - Radio Edit' 'Only For You - Maor Levi Remix'
'Typhoon - Original Mix']
Уникальные значения колонки track_artist: ['Ed Sheeran' 'Maroon 5'
'Zara Larsson' ...
'Ferry Corsten feat. Jenny Wahlstrom' 'Tegan and Sara' 'Mat Zo']
Уникальные значения колонки track_popularity: [ 66  67  70  60  69  62
68 58 63 65 35 64  8 30 56 55 59 87
83 61 57 53 34 74 46 52 45 51 48 39 71 81 85 76 75
73
79 16 84 37 36 72 77 82 41  5 24 18 47 80 96 86 19
27
43 91 42 21 54  9 23 40  2 11 50 10 49  6 25 95  1
4
28 29 38 17 31 26 32 12 44  7  0 13 78 88 94 22 98
97
90 93 92  3 33 20 14 15 89 100 99]
Уникальные значения колонки track_album_release_date: ['2019-06-14'
'2019-12-13' '2019-07-05' ... '2012-02-06' '2012-11-11'
'2014-04-18']
Уникальные значения колонки playlist_name: ['Pop Remix' 'Dance Pop'
'Dance Room' 'Cardio' 'Dance Pop Hits'
'Pop Warmup 130 BPM' 'Dance Pop: Japan' 'K-Party Dance Mix'
'Dance Pop Tunes' 'Pop / Dance' 'Todo Éxitos' '90s Dance Hits'
'Christian Dance Party' 'Pop Dance Hits' 'Best of 2019 Dance Pop:
Japan'
'Ultimate Indie Presents... Best Indie Tracks of the 2010s'
'TUNES DANCE AND POP' 'Pop Inglés (2020 - 2010s)♡ Música En Inglés
2010s'
'ELETRIC POP & DANCE' 'Pop - Pop UK - 2019 - Canadian Pop - 2019 -
Pop'
'The Sound of Post-Teen Pop' 'Post teen pop'
'post-teen alternative, indie, pop (large variety)'
'Pop Punk | Post-Hardcore' 'Post pop teen' 'Intro to Post-Teen Pop'
'Post Teen Pop' 'Someone You Loved Lewis Capaldi (Pop Music Mix)'
"Dr. Q's Prescription Playlist" 'a taste of the mainstream'
```

'post teen pop' 'BALLARE - رقص' 'Post Teen Pop' 'Post-Teen Pop'  
 'Post-teen pop' 'post-teen pop' 'Electro Pop | Electropop'  
 'Electropop Hits 2017-2020' 'Electropop 2019' 'ELECTROPOP'  
 'This Is: Javiera Mena' 'ElectroPop 2020' 'Electropop - Pop'  
 'This Is Janelle Monáe' 'ELECTROPOP🎧' 'Electropop 80/90s'  
 'Electropop'  
 'Electropop And Play' 'Mix ElectroPop//ElectroHouse// DeepHouse 2020'  
 'ELECTROPOP EN ESPAÑOL'  
 'Maxi Pop GOLD (New Wave, Electropop, Synth Pop...)'  
 'Gothic / Industrial / Mittelalter / EBM / Futurepop / Gothik /  
 Electropop'  
 "80's Songs | Top 100 80s Music Hits" 'GTA V - Radio Mirror Park'  
 'ElectroPop' '10er Playlist'  
 'Indie Poptimism (PUBLIC, The Band CAMINO, lovelytheband)'  
 'Chillout & Remixes ♡' 'POPTIMISM' 'The Sound of Indie Poptimism'  
 'Indie/Jazz Poptimism' 'The Edge of Indie Poptimism'  
 '2019 in Indie Poptimism' 'Indie Poptimism'  
 'A Loose Definition of Indie Poptimism' 'Intro to Indie Poptimism'  
 'indie poptimism🎧🎧' 'The Pulse of Indie Poptimism'  
 "random playlist that can't decide its genre so go ahead jam along  
 with these catchy tunes"  
 'Indie Poptimism!' 'indie poptimism' 'Music&Other Drugs'  
 'Deep-deep Bubble Pop' 'RapCaviar' 'Jazz Vibes' 'Lush Lofi' 'RAP 91'  
 'Lo-Fi Beats' 'Hip-Hop Central' 'Generacja Hip Hop' 'Hip-Hop Drive'  
 'Hip Hop Controller' 'Hip-Hop Favourites' 'Al Hip-Hop' 'Hip-Hop  
 Mixtape'  
 'DK rap' 'This Is Logic' 'Lofi Hip-Hop' 'Rap Workout'  
 'Alternative Hip Hop' 'Modus Mio' 'Hip Te Hop' 'Arena Hip-Hop'  
 'Southern Hip Hop' 'Southern California Hip Hop Primer'  
 'Dirty South Rap Classics by DJ HOTSAUCE' "90's Southern Hip Hop"  
 '90s-2000s Southern Hip Hop / Crunk' 'Viral Southern Hip Hop'  
 '► Hip Hop Dance Music – Urban – Trap – Breaking Locking Popping  
 Bopping – WOD – World of Dance'  
 'Badass Rock' 'The Sound of Southern Hip Hop' 'Southern Soul BBQ Mix'  
 "🎧🎧 Hip Hop, Rap, Heavy 808's - New School" 'Minitruckin Playlist'  
 "Hip-Hop 'n RnB" "90's Hip Hop Ultimate Collection" 'HIP&HOP'  
 'Contemporary Hip Hop' '3rd Coast Classics' 'Southern soul & hip hop'  
 'Gangster Rap' 'Gangster Rap Workout' 'Russian Gangster Rap'  
 'Gangster Rap | 100 % Gangster' "Gangsta Rap/90's Hip-Hop"  
 'Gangster Rap Deutsch' 'GTA San Andreas Radio Los Santos'  
 '90s Hiphop / Gangsta Rap' 'Gangsta Rap 💎 Rap Party'  
 'Oldschool Gangsta Rap 🎧' 'GANGSTA Rap' "90's Gangster Rap" 'RAP  
 Gangsta'  
 'RUSSIAN Gangster Rap' 'GANGSTA RAP'  
 '90s Gangsta Rap / Top Hip-hop Classics' 'Mexican Gangsta Rap'  
 'Rap Party 24/7 Radio / Gangsta Rap' '< DARK TRAP >' 'Zona Trap'  
 'Trapperz Brasil' 'Trap Land' 'Trap strefa' 'Trapperz' 'Trap Nation'  
 'Flow Selecto' 'Trapperz Argentina' 'Trap Mojito' 'Trap Ouro' 'Trap  
 Funk'

'Trap Rewind' 'Arabic Trap' 'Sad Trap' 'Dose Trap' 'Trap Nation 📢'  
'Trap Argentino - Trap Argentina' 'Trap Luv' 'Trap 2020 🎆'  
'Trap Americana' "This Is Guns N' Roses" 'Michael Learns To Rock  
album'  
'The Black Album' 'City Pop 1985 シティポップ' 'The Cranberries Best  
Of'  
'Vault: Def Leppard Greatest Hits' '80s Pop & Rock Hits and Album  
Tracks'  
'Rock and Rios' 'Progressive Rock / Metal - Rock /Metal Progresivo'  
'Mega Rock Ballads: The Best Slow Rock Compilation Ever !'  
'House Of The Rising Sun' 'Coldplay – Ghost Stories (Deluxe Edition)'  
'70s Pop & Rock Hits and Deep Tracks' "L' ALBUM ROCK"  
'ONE OK ROCK with Orchestra Japan Tour 2018 Setlist'  
'The Queen - La Discografia Completa' 'Soda Stereo – El Ultimo  
Concierto'  
'Nikki Sixx's Top Pixx' 'The Sound of Album Rock' 'Caifanes La  
Historia'  
'Rock Classics' 'Classic Rock' 'Classic Rock Drive'  
'Classic Rock Workout' 'Pinoy Classic Rock' 'Classic Rock Now'  
'Soft Rock Drive' 'Supernatural Classic Rock' 'Classic Rock Legends'  
'Classic Rock 70s 80s 90s, Rock Classics - 70s Rock, 80s Rock, 90s  
Rock Rock Classicos'  
'Southern Rock/Classic Rock' '80s / Classic Rock' 'Afro Psychedelica'  
'Classic Rock Retrogamer' 'Workday: Rock Classics'  
'Classic Rock Greatest Hits' 'Blues Rock' "70's Classic Rock"  
'Classic Rock Radio' 'Classic Rock Playlist.'  
'The Sound of Permanent Wave' 'Permanent wave'  
'Muse Radio - (Uprising, Starlight, Supermassive Black Hole,  
Madness)'  
'Permanent Wave' 'Permanent wave 🌊' 'permanent wave' 'keg party  
jukebox'  
'Intro to Permanent Wave' 'Permanent Wave CHDB' '🔊🔊🔊 mixed'  
'SNZB PERMANENT WAVE' 'I didn't know perm stood for permanent (wave)'  
'Modern Indie Rock // Alternative Rock / Garage Rock / Pop Punk /  
Grunge / Britpop / Pop Rock'  
'Permanent Wave Cafe' '"Permanent Wave"' 'Rock Hard' 'Hard Rock'  
'80s Hard Rock' 'Hard Rock Workout' 'This Is Scorpions' 'HARD ROCK  
CAFE'  
'Hard Rock Cafe Classics' 'Hard Rock Workout!' 'Classic Hard Rock'  
'Workout Hard Rock' 'Rock Hubspot' 'HARD ROCK Vibes' 'New Hard Rock'  
"Rock Ballads 80s 90s | Best Rock Love Songs 80's 90's Music Hits"  
'70s Hard Rock' 'Hard Rock Classics 1967-1991 (Party Edition)'  
"2000's hard rock" 'Tropical House' 'Paraiso Tropical' 'Vibra  
Tropical'  
'Tropical Vibes' 'Punto Tropical' 'Orgulho Tropical'  
'Tropical House 🎧 2020 Hits' 'Tropical House 🌺' 'TROPICAL🌺'  
'Tropical Rising' 'Sunny Beats' 'Tropical Nights' 'Tropical Beats'  
'Tropical House Remixes 🎧 Tropical Remixes & Tropical Covers'  
'Tropical House 2020' 'Tropical Morning' 'Paraíso Tropical'

'EDM TROPICAL' 'Tropical House Run 190 BPM' 'Latin Pop Classics'  
 'Latin Pop VIP' 'Global X' 'Latin Pop Rising'  
 'LATIN POP 2020 🎵 Pop latino actual' 'MIX LATIN POP°'  
 'This Is Gloria Estefan' 'Latin Pop antiguo' 'Unplugged Hits 🎧'  
 'Latin Pop Songs' 'F\*\*KIN PERFECT'  
 'Pop Latino 2019 - Mix Canciones Reggaeton & Pop Latino - Pop En Español 2019 Musica Para Bailar'  
 '2020 Hits & 2019 Hits – Top Global Tracks 🎵🎵🎵' 'INDIE POP! TUNES'  
 'RADIO POP CHARTS' 'LATIN POP- DJ GIAN' 'Fiesta Latina Mix 🗨️🎧🎵👤👤  
 \*🎧'  
 'Exitos 2020 - Latin Billboard' 'Latin Pop 2019' 'Great Pops'  
 'Baila Reggaeton' 'Mansión Reggaetón' 'Reggaeton 2020 \*'  
 'Reggaeton Classics' 'Perreo City' 'De Fiesta' 'El Ritmo' '¡Viva Latino!'  
 'Reggaeton De Ayer'  
 'Tusa - Karol G | China - Anuel AA | Estrenos Reggaeton y Música Urbana 2019'  
 'Verano Forever' 'Reggaeton Rewind' 'REGGAETON ANTIGUO 🎵'  
 'Academia Reggaetón' 'REGGAETON VIEJO' 'Todo Reggaeton'  
 'Reggaeton 2020 🎵🎵' 'Reggaeton viejito🎵' 'This Is: Don Omar'  
 'latin hip hop' 'Latin Hip Hop/Freestyle' 'Chicano Rap'  
 'Global Top 50 | 2020 Hits' 'Latin Village 2019' 'Urbano: Latino Vibes'  
 'Latest Latin American Hits 2020' 'Latin Hip Hop & Rap Playlist 2019'  
 'Pop 2009-2011' 'Latin/Hip Hop/Dancehall/Soca'  
 "80's Freestyle/Disco Dance Party (Set Crossfade to 4-Seconds)"  
 "Today's Hits 2000-Present" 'VidaLoca - Latin / Raggaeton / Hip Hop ©'  
 '🎵🎵 GOOD VIBES ONLY 🎵🎵 // BROEDERLIEFDE || FRENNA || BROEDERS || HENKIE T || BIZZEY || POKE \\\\''  
 'LATIN FLOW MIX - Música Cristiana🎵'  
 'Hot Latino Mix (Latin, Hip Hop, Rap, RnB, Dancehall, Reggeaton, Afro)'  
 "HIP-HOP: Latin Rap ['89-present]" 'School Dance 2019 (Squeaky Clean)'  
 'Los Cangri' 'New Hip Hop\u200f\u200f\u200b\u200b \u200d'  
 'Contemporary Urban' 'URBAN NATION' 'Most Popular 2020 TOP 50'  
 'New R&B\u200f\u200f\u200b\u200b \u200d' 'Top Urban Underground'  
 'Urban Contemporary' 'The Sound of Urban Contemporary'  
 'Chixtape 5 - Tory Lanez' 'urban contemporary' 'Urban contemporary'  
 'PROJECT: Contemporary' 'Urban/Trap - Contemporary RAP'  
 'urban CONTEMPORARY' 'Gospel' 'Cuban vibes only'  
 'The 1950s/1960s/1970s/1980s/1990s/2000s/2010s with pop/r&b/soul/boogie/dance/jazz/hip hop/hop/rap.'  
 'Brisa Pop' 'Pop Hits 2020'  
 'Ultimate Indie Presents... Best Tracks of 2019' 'Feeling Accomplished'  
 'Pop / Hip-Hop: Gas 🏠'  
 'Charts 2020 🎵Top 2020🎵Hits 2020🎵Summer 2020🎵Pop 2020🎵Popular

Music🎧Clean Pop 2020🎧Sing Alongs'

'Girl On Fire' 'Hip pop' 'Nidza Bleja - English HIP HOP/POP Songs'

'90s/00s Hip Hop & RnB' 'TOP 50 GLOBAL 2020 UPDATED WEEKLY 🌐🎧

WORLDWIDE'

'Hip Pop 2019' 'Bluegrass Covers' 'Latest Hits 2020 - Pop, Hip Hop & RnB'

'Musica Italiana 2020 - Playlist Pop & Hip-Hop (Canzoni Italiane 2020)'

"Today's Hits (Clean)" 'Smooth Hip Hop' 'Fresh Essentials'

'New Jack Swing' 'New Jack Swing - 90s R&B fused w Hip Hop'

'New Jack Swing/ R&B Hits: 1987 - 2002' "90's NEW JACK SWING"

'Swingbeat (old skool), New Jack Swing, R&B, Hip Hop, Urban'

'New Jack City' '90s R&B - The BET Planet Groove/Midnight Love Mix'

'New Jack Swing | The Best 🎧' 'Ultimate Throwbacks Collection'

'Back in the day - R&B, New Jack Swing, Swingbeat, RNB..etc.'

'CSR 103:9 (GTA: SA)' 'Best of New Jack Swing'

"New Jack Swing -late 80's & early 90's Hip Hop and R&B"

'The Sound of New Jack Swing' 'The New (Jack Swing) Testament'

'80s-90s R&B / New Jack Swing / Funk / Dance / Soul'

"Kenny B's Ultimate New Jack Swing Mix" "R&B 80's/90's/00's"

'1987-1997 OLD SKOOL JAMZ' 'I Love My Neo-Soul' 'Neo Soul Music'

'Neo-Soul' 'Neo-Soul Guitar' 'NEO SOUL GUITAR'

'Neo Soul / Modern Jazz / Smooth Hiphop' 'NEO-soul'

'Groovy // Funky // Neo-Soul' 'Christmas Soul' 'Neo-Soul / Soulful R&B'

'Neo Soul 2019' 'NEO FUNK AND SOUL' 'Neo Soul'

'Saxophone in Hip Hop - R&B Lounge - Jazz Rap'

'Japanese Funk/Soul/NEO/Jazz/Acid' 'Neo-Jazz Soul RnB & Afro'

'Gospel Neo Soul' 'Soul Coffee (The Best Neo-Soul Mixtape ever)'

'Neo-Soul Essentials' 'Sexy Soul 2020' 'Electro House 2020'

'Electro House Top Tracks' 'Nasty Bits' 'Electro Posé - Discoveries'

'Techno House 2020 🎧 Best Collection 🎧 Top DJ's Electronic Music - Deep House - Trance - Tech House - Dance - Electro Pop'

'EDM 2020 House & Dance' 'Electro Vibes' 'Electro Swing Top 100'

'Electro Swing' 'Electro House' 'ELECTRO HOUSE 2020' 'New House \u200d'

'Jeff Seid Electro House' 'Crossfit\u200f\u200f\u200b\u200b \u200d'

"Electro House - by Spinnin' Records" '🔗ELECTRO-HOUSE-TECH🔗'

'Fitness Workout Electro | House | Dance | Progressive House'

'Club Mix 2020 🎧' 'House Electro 2019'

'🔊BASSBOOSTED🔊>ELECTRO HOUSE<🎧EDM CAR MUSIC2018/2019🎧' 'Big Room EDM'

'Big Room Beast' 'Big Room House | Festival Bangers'

'PAROOKAVILLE - Big Room' 'Big Room House / Bigroom'

"Big Room EDM - by Spinnin' Records" 'BIG-ROOM NEVER DIES !'

'Dancefloor Beats' 'Bounce United' 'Locker Room'

'Sick Big Room House Drops | EZUMI'

'big boom room - TOMORROWLAND EDC EDM BIG ROOM AMF ADE DANCE TRANCE HARDWELL TIESTO'



'Trance Party 2019 by FUTURE TRANCE' 'SINULOG Festival 2020'  
'[EAS]: Festival Big Room' 'Big White Room-Jessie-J' 'Big Room House'  
'ALPAS Music Festival' 'Epic Bass Drops' 'Big Room 2019'  
'@deniceemoberg EDM - POP REMIXES' 'EDM House & Dance' 'Pop EDM  
Remixes'  
'EDM 2019' 'Waves Pop and EDM' 'Pop Hits 2000-2019' 'EDM - pop  
remixes'  
'Verão 2020 | Pop | Funk | Sertanejo | EDM | Top Hits 2019 - As Mais  
Tocadas'  
'2010 - 2011 - 2012 - 2013 - 2014 - 2015 - 2016 - 2017 - 2018 - 2019  
- 2020 TOP HITS'  
'K-Crazy Michioso Tunes' 'EDM Trap' '2015 songs' 'Pop EDM'  
'Tastemakers Ball - EDM - POP and FUN' 'EDM Pop' 'Happy EDM'  
'EDM/POP'  
'Selected House' 'Deep Electronic Music 2020 & Progressive House'  
'Female Vocal EDM' 'Vocal House'  
'Hands Up\u200f\u200f\u200b\u200b \u200d'  
'House/Electro/Progressive/Disco/Lofi/Synthwave' 'Alex Workout'  
'2011-2014 House' 'Electro/Progressive/Club House'  
'CHRISTIAN ELECTRO / DANCE / EDM' 'Epic Bass Drops | Best House  
Mixes'  
'Brand New EDM' 'Electrónica, Progressive House, Electro House y  
más 🎧'  
'Gym (Melbourne Bounce/Progressive House)'  
'Fresh EDM | Progressive House | Electro House | Trap | Deep House |  
Electronic | Future House/Bass'  
'Festival Music 2019 - Warm Up Music (EDM, Big Room & Progressive  
House)'  
'Underground Party | Hypnotic | Minimal | Acid | Big Room | Tech |  
Liquid'  
'Trending EDM by Nik Cooper' '♥ EDM LOVE 2020']  
Уникальные значения колонки playlist\_id: ['37i9dQZF1DXcZDD7cfEKHW'  
'37i9dQZF1DWZQaaqNMbbXa'  
'37i9dQZF1DX2ENAPP1Tyed' '37i9dQZF1DWSJHnPb1f0X3'  
'37i9dQZF1DX6pH08wMhkaI' '37i9dQZF1DX3PIAZMcbo2T'  
'37i9dQZF1DXahYFr91pFvG' '37i9dQZF1DX4RDXswvP6Mj'  
'0B2HdP15IucgE0vk3sluJR' '4SdfG4cPG3skmTiQLozZGh'  
'6mXh8CUBMBsBUu88a4eAQV' '2ji5tRQVfnhaX1w9FhmSzk'  
'50cXvxgMGrvoUeLhkzCyIO' '37i9dQZF1DWUUP00Sbx2CM'  
'7eERKCKgNKCCx5GYdeMIZf' '37i9dQZF1DXd0tZGKonFLM'  
'37i9dQZF1DWTHM4kX49UKs' '3arpkhoRWXEYbdCpVAIrRR'  
'40Az01Z92yqqD6Mf3m0ANu' '7316uT3vVzTidCI8cinBUv'  
'46Cl6dmeiylK6TRGXr7hHe' '10FCW9lj0NdeoYI5VVvVtY'  
'7jQH0rErpLMStcUUSavQWR' '1y42gwI5cuwjBslPyQNfqb'  
'1YgWQAs1s77NzieIH4ARKn' '222nc9tKxKhfZ2GBrOpwH3'  
'6o6MNYZqHsKMAKcCHPNu7K' '6IT8LGpwLw3Pt2XnVUBN7j'  
'6IErGHjBfhey8URq0mFnPi' '6jAPdgY9XmxC9cgkXAVmVv'  
'4gbXqmZDUFHqlaYjf4uVyS' '2l1tt5ouiE0301o2jbxn30d'  
'1CMvQ4Yr5DlYvYzI0Vc2UE' '2Aud8PXoTGcyY5esHu4Aaz'

'45AKTTGQEfYgAyidW5hucn'  
'6HprqD6WZMx5peClrxaprN'  
'2KyjkYsSsC1UR75b0m98vd'  
'2a5i2ZtEXGKwVGL16J8N0p'  
'4Bi8VLtaSu0JILLiif8lH6'  
'37i9dQZF1DWS0vcBNdfJ87'  
'5TiiHps0hNCyQ6ijVknZQs'  
'44p8nNLe4fGfUeArS3MaIX'  
'2Z5cPJ6Z4EVZAFf08amjvL'  
'23swqzp0ZwW1NhPiZ7iyFI'  
'2nRWtTI9a2LWjJ9Wy3JZs5'  
'65HtIbyFkaQPfLca4ow8K0'  
'0cuHKz65ZPqBX1brG8djlG'  
'69yb02k0Z0mukYaxJXwp76'  
'6lWmi4lPiiPwDqn8ZpeyAY'  
'60aTudLqBEuTyUMPxRnpZc'  
'16RNbqnNCCLlBJti7JU5nc'  
'4Z00wp9G8FA3X6oYNBzda6'  
'6MQeEHHDs6H0KN5Dlj3oKo'  
'49qyKvg6UAQAvIMUIGMnP3'  
'4hKPJNFihdAg4pAksn78FJ'  
'2QiMewRbSavfZ9MSAYz2h6'  
'744VCLUYfFnZCDPc0Ukg5G'  
'37i9dQZF1DX0XUusxWHRQd'  
'37i9dQZF1DXc8kgYqQLMfH'  
'37i9dQZF1DWWQRwui0ExPn'  
'37i9dQZF1DWXJnyndhASBe'  
'37i9dQZF1DWT5MrZnPU1zD'  
'37i9dQZF1DX0sDai2F5jCQ'  
'37i9dQZF1DXdhDukKQ88Cc'  
'37i9dQZF1DX36Xw4IJIIVKA'  
'37i9dQZF1DWTggY0yqBxES'  
'37i9dQZF1DWTqYqGLu7kTX'  
'4lcyWQD0zPfcBzrcBI3F0W'  
'0tLHH1C4HkWEUCXXSSjb0e'  
'5wsWBmQgDtKa8CEg7wTEMi'  
'0Hr2h94pKN8QAGVAgD6BsD'  
'18jT9NMRZifv6cMtK2jWD4'  
'3jPkaExIWXQWklcmmF5180'  
'0275i1VNfBnsNbPl0QIBpG'  
'5DyJsJZ0pMJh34WvUrQzMV'  
'68y3WoFJMMKDHIUpqCnoM3'  
'57sYMLFXGD4ZqizzcMD7Lz'  
'5joQabz9ys3XPGBsX5CaKv'  
'0u0qLLE8MZc679RZWck1TT'  
'39IFMVQdRNdb7kVfyTvHjM'  
'6m0BqpJfSP2m5xC0FjDRHw'  
'0BwUQpqHSLC2YfKw0p2dQV'  
'5GA8GDo7RQC3JEanT81B3g'  
'6rjxP7GQKoqqgoakzxl3PY'  
'3kvwJXPULhSUaLL6ykJbn5'  
'4TvZA7Pml7mHLgbwNomlnm'  
'7kyvBmlclUqsTL0EuNLrx'  
'2UsEj2GUukV0GLbsE3rldz'  
'4frhr6RQM2fM0m2mpv0Vo6'  
'37i9dQZF1DWVT93EW7kPT9'  
'3FBD3d5zL74LaoBMVC4IXq'  
'7p30DzTAgW60hspSXHTI88'  
'3VfscqF7zq65IGKiYM3FS0'  
'53CmFroG6MWR5re00XJX6B'  
'31R7Gd07KsDafqJEeL4Hqr'  
'1kEczIkZH8IgaWT2BiApxZ'  
'4NlAd9NpIa92IjErMyAriM'  
'7nHgmV7uyIA1KHj6qTttjH'  
'5vIdb67lQcdFwoVKE4UMep'  
'1pZWCY50kMUhshcESknir8'  
'6Ylmweq4pT7j3ScIv5uqlc'  
'5qFX00xrQVyS4UCq3UilZN'  
'7Ic1UwucK3ozdycPBIPVSR'  
'1E5VdGGWkpDQ682gdvJAZH'  
'5jR0YSZSL7c00jGAqkPx7C'  
'2lnxmipQe5xtXoHHPaYfnY'  
'37i9dQZF1DX0SM0LYsmbMT'  
'37i9dQZF1DX1ct2TQrAvRf'  
'37i9dQZF1DWY6tYEFs22tT'  
'37i9dQZF1DWUFmyho2wkQU'  
'37i9dQZF1DX48TTZL62Yht'  
'37i9dQZF1DWVdgXTbYm2r0'  
'37i9dQZF1DWTIuAboZgTMf'  
'37i9dQZF1DX76t638V6CA8'  
'37i9dQZF1DX36edUJpD76c'  
'37i9dQZF1DWVFZbCNivv6B'  
'206vi9Q0p3juAU73flxPsz'  
'2NMW1nwQYSVLXd26uLenX6'  
'0DdGqNa18DwYyfIR050rW1'  
'44bkJI1QGkT200GYJSsbkp'  
'3nTS97zUqxJBQeiXNRs963'  
'0VVH2Nzj6kBVGK3WlUQMAw'  
'4IG024zoaGMurhTFBkMAv9'  
'3R5c10fJY7RzL3p28pzGtL'  
'1QJ66s6YBZgxMUaVUyrhbo'  
'4xJULuV0P5PLcMe3xP8Pgj'  
'0ZRwrJ2EDGyKR6YgQPWXe0'  
'2e0d7otcMloyecfi3zZPWk'  
'1qXg9ck25tBRxeXsj8mbDG'  
'5yGuo0wRQF3o8NVRRLvCj7'  
'0t9TeyXE2mWe70JT3YwSoH'  
'1g3APxk2mLVNU2TuHCPli0'

'1Z1gW89x4MSBj kvVj Gg7DQ'  
'62spXXfUxBed8nbd5xvH20'  
'0C2zyPd lkbW HrwVg9gqNdU'  
'4sGnz2x5tbHE2YlW1nemfb'  
'37i9dQZF1DWXU2naFU n37x'  
'37i9dQZF1DXde9tuMHuIsj'  
'37i9dQZF1DWUmxBdWX3Pp4'  
'37i9dQZF1DX40j f0teYnH8'  
'37i9dQZF1DX10IMC8iDi74'  
'37i9dQZF1DWTGaQ84g8alz'  
'37i9dQZF1DXcC6YLqj8ET8'  
'37i9dQZF1DWWlW7KLhEhCZ'  
'6ltss0ThreZ3uIMn5mr4Tm'  
'37DFLy7lqF3qiR99Ss2ZGR'  
'37i9dQZF1DX74DnfGTwugU'  
'0KNLLunbFh9XgitPM0GmQg'  
'4E3K9oQgvLcKEz0wgBBXxD'  
'0X0IK4m26aeYSD61E5nSVW'  
'7GhTpb4e0p6403Bmgqz3db'  
'1bMYfBH YBCRH Y5LGkjlpSy'  
'1uKFRCQYci8kVgMy3xzTVH'  
'2gt9IfM8ASNiDzqg5jKyR5'  
'3opI xv3Y5GmXDNpbLFZxIm'  
'3yj9YnQGTdnFuKbDyXGDi6'  
'37i9dQZF1DWXRqgorJj26U'  
'37i9dQZF1DXd0EFt9ZX0dh'  
'37i9dQZF1DWYDQ8wBxd7xt'  
'37i9dQZF1DX6TIU4D13l0Y'  
'3NcxM1LJJdua8AcRxtijNY'  
'0QUlq0LMDVXSBtbyYLTyZh'  
'37i9dQZF1DWVyizF9BJ61m'  
'37i9dQZF1DX1lwxXvReaux'  
'56dbowk1V5ycS5jw7DSvi5'  
'4lIywN6kXl9KPm30Q8u8G7'  
'4EYSGTuqe9cVfSVpX4gtGv'  
'0dAbaJtkS9st5o0cBe1Zcu'  
'2ExyzXAbukw7I8bDqdGvPB'  
'7rPs fDTqiZYIT4PVzQ4c0c'  
'5glAD13obyL0G9SH9ukBz2'  
'6dqpVI7qwYLyNqbg0MPad3'  
'2b0jjgN1S3Gqd8vMyafvJ'  
'3e6gYPyrTbaB8BWgSHCt5j'  
'1VnvyBDqoV5TCZAnXYferL'  
'3HjTMn606adW8vcSMnqmhW'  
'37i9dQZF1DWwJ0mJ7nRx0C'  
'37i9dQZF1DX68H8ZujdnN7'  
'5n00372uzp0M5rB2bRWfkp'  
'55ybnG2z8rpTIERfnCsw6'  
'6kXNv8J3HCYzt xj0IUzApv'  
'0Jw0HckkxCfIr0vpN081eV'  
'3DUkl93JjPd0yX83SJr5ms'  
'28Ke4pXWqF2A5b2GfQ1pQt'  
'19WuHd4MxWLzE1fpMmw4S4'  
'37i9dQZF1DWwr5uieiPUVM'  
'37i9dQZF1DWY3UKS6jvnxr'  
'0NCspsyf00S4BsPgGhkQXM'  
'37i9dQZF1DWXrVH01e3PIE'  
'37i9dQZF1DWYBXtbGSCurj'  
'37i9dQZF1DX0JcH25923HT'  
'7kzKtw5vug3IIxKfLadi8A'  
'5aPwKjwNHR6dnCeJLcPTVx'  
'37i9dQZF1DWTLx0kM7PwUb'  
'7tkgK1tm9hYkwp7EFy0cAr'  
'22XKr706bzSA5bHiwRCPNK'  
'3j2osvmecEao5nmo9jZ5df'  
'6BKqPGcrFMy6TczW0R5Vsz'  
'2gpKfzXEi8QWvgBNPDPk5R'  
'6LJtRKgDpzM8ZbbwC0jLhe'  
'6h9DHd1pHHiK84cQqJZyIp'  
'0jilq2XZP9F2fwzp2k6iXK'  
'3E88dLx4fgFYY70gdGzdnB'  
'5d1arTPDEr76KMg9geDinZ'  
'3kysJw7lvVwSo0aL0KyW94'  
'5BygwTQ30rbiwVsQhXFHMz'  
'37i9dQZF1DWYNSm3Z3MxiM'  
'37i9dQZF1DX0fWtUuB7bFE'  
'6oghIlByD49KFGNmNU8GSH'  
'3Ho3i00iJykgEQNbJB2sic'  
'29dTr0urPDrMc rnio2q6hZ'  
'6gUFdcGzKAHyDXY9TKC6cP'  
'6TeyryiZ2UEf3CbLXyztFA'  
'76lrxCrKrGDkDDf3SVPnl3'  
'7CESj1xKbxdArRzloygvkl'  
'0t0y7ZY4E2PadXIyj8zU43'  
'5Go0Jsxj1UnsU70m841BEo'  
'0QN4FeJQ1mpCygRg9r2JIK'  
'4PjiT7SWnUsTTTvK0uR76f'  
'3QGjcvI9hCZw81NqKq3ZGv'  
'2foj4ZYVHRGqSd1aMqNPBj'  
'6CgjYkPIWTxJi8RtPcki02'  
'3uFyGoayrP71xS6T6Y8Bh2'  
'0VS9w0NY4KXfLORkhy81s8'  
'03qQtbnHoJuFezRu2CnLuF'  
'37i9dQZF1DX1X7WV84927n'  
'3YouF0u7waJnolytf9JCXf'  
'37i9dQZF1DWViGKI2U5P2K'  
'3sv5ViKoPDNnZRsklzEGMN'  
'5nQrMpkyWmxPX0gk74htMk'

'1gAeQGQ7hr2q7IYmaejDW6'  
'5hvf4yL105Rw6cvCP6AMjM'  
'64BvJcehegyvhqQtV82Ddz'  
'6pZlZ20vt3aDjIKw98aBtQ'  
'0EmGNFBbgqLmvdQGPbgiMp'  
'37i9dQZF1DWYey22ryYM8U'  
'37i9dQZF1DX6RA5ZrA5a23'  
'37i9dQZF1DWZ1FUX6sM67g'  
'2SRbIs0eBQwHeTP7kErjwo'  
'0TT57Pe3RZNGCy98G1UQpM'  
'37i9dQZF1DXbtuVQL4zoey'  
'37i9dQZF1DX1bDvyV0IkZ3'  
'2oivDYqmlDQK4KbwVJTaf6'  
'2v41efarf6e6iY8qpMK5Gj'  
'37i9dQZF1DWSTc9FdySHtz'  
'37i9dQZF1DX1QnNyJ0BQBV'  
'37i9dQZF1DX8womvTyUjrN'  
'6IS6XTdbS9qJZgfjNKgpB8'  
'4BmnnqWEQAamNoVjtjrQJP'  
'5u0MV7g6vp8WxoqXfkzKaw'  
'5ifDekrUt5lbSIMITSzNNqB'  
'0HD4Pc1PK8fsyKQq9e2U2v'  
'2v3I1zS56Y0cNHYS0AiCGV'  
'0k2IDDKcVyIpIgE6dlwoDM'  
'5S07xYih5w8X5FEpKvU7Rt'  
'37i9dQZF1DWZjqjZMudx9T'  
'37i9dQZF1DX8SfyqmSFDwe'  
'37i9dQZF1DWVskFRGurTfg'  
'37i9dQZF1DX10zKzsJ2jva'  
'0T47pLnihK4xB8Bk9IQ0Dv'  
'37i9dQZF1DXco40dkIraMD'  
'37i9dQZF1DXd8p9XRfIfUn'  
'4csIMGPI3aGo3Xy7WG8jBi'  
'0si5tw70PIgPkY1Eva6V8f'  
'3nH8aytdqNeRbcRCg3dw9q'  
'3o3xRXWMtBMezk0E3wmtGI'  
'3JcJCsvBnRsA6oc7eUYDSB'  
'51LvliKED7oZNJR8XCiPip'  
'3gV6KQYZKIuoWml0094vx6'  
'1oReEujyWpQv20X68BVPPA'  
'7EPbNmUW9nkRplDLN9te4'  
'396llvvF0IB9jgPg0kqNDb'  
'5fWgI0IJ1el5NB1sZ0Egsx'  
'2hTs6GuPwhmg4ApNqxWXL'  
'6wyJ4bsjZaUKa9f6GeZLA0'  
'1fqkbjEACMLEkdddm5aobE'  
'4Gc9TFxlqmo50m9Yy78ei'  
'07zf8MjQPsiYUXiAIGZ5TA'  
'7en9i0JMyJlRFX4r4XrXXx'  
'4TG1lzMD9HFvZ9E1Bk6Gnu'  
'28817h8FTrRI4V40DqHVab'  
'0y8MUle9Lf8VDNjPsskzJB'  
'1NIX36ZFWetgXSbSNghoue'  
'37i9dQZF1DX0AMssoUKCz7'  
'37i9dQZF1DX3fXJqxGjuEP'  
'37i9dQZF1DXd8Gn5cSmvFy'  
'37i9dQZF1DWZ8fJXMbebf9'  
'06zrBJ5cts5aemZmqe80J7'  
'37i9dQZF1DX07X8UDWKEwP'  
'37i9dQZF1DX0ES2mn0Vvai'  
'3YdAwfgQLMS4AN2WjRfRlb'  
'0vbtbmyihyvl2MVYrdKdGw'  
'3pS63EDS40FVGYL41zAcU4'  
'37i9dQZF1DX6ThddIjWuGT'  
'37i9dQZF1DWUxHPh2rEiHr'  
'2kKzN3kRYDzBctlaWs7CP2'  
'37i9dQZF1DXarsfY89zXC6'  
'5NTm3injIRkUMR0sZr3C20'  
'3CzQZEf6jmEjDmBIV09rdR'  
'4JkkvMpVl4lSioqQjeAL0q'  
'6Hbd65HmEAxTJ3cHZNUz2h'  
'2kY6lVc5EcVfI5WNKmpQQG'  
'5w0NX0lVyQE5XTxqjTUiUd'  
'37i9dQZF1DWY7IeIP1cdjF'  
'7xWuNevFBmwnFEg6wzdCc7'  
'37i9dQZF1DWUlCmB8llCTB'  
'37i9dQZF1DWV0LXB0ylBUZ'  
'37i9dQZF1DWwU6Rfto8Ppm'  
'37i9dQZF1DXdnGF350awbN'  
'42E6uFhL4e2nXmbmeigwXb'  
'31hG19URdBvLEpQWKfYfdD'  
'03sDEv7FN58Mb9CJ0s1Tgn'  
'37i9dQZF1DWYBUdckfg1va'  
'2MYEUjX0YAI9dxrBDzoCK7'  
'1KNl4AYfgZt0Vm9KHkhPTF'  
'0VsVywryrqLhHmsVFVc0Ag'  
'6hIDPF658AhRbxr8HN70eA'  
'2rg9LCyvaMQvnCE2hVndpR'  
'6a66cg3HcsjYkisYyQcov6'  
'1d0fonZHpN4LYHTKbmNRbm'  
'3hR2R6szlkwZeGyclTgHcF'  
'0SqaMfNsngZCpPw0UuelA7'  
'5WNUX6jisX0NRlVDTm6RDd'  
'4EKXjB5zlv2DpTS84h407H'  
'4I6rTSxqKL1LRvES209owQ'  
'4Pbs84EQbuAblxlp6Chz0d'  
'0UXwwVDipbBQeEX7h4YuKU'  
'1ZLL3IQS8eB0s0RMxz02yD'

'0q0JuaqHeg4uli6gjPKnxE'  
'5CK0fshHciklvWyeCc0zat'  
'1nFfDHtp8RY3obgen8KODl'  
'4425cRh83Uzor4qCRfM9lb'  
'1S7BckuYIkEazeNK0SM0uA'  
'5TDtuKDb0hrfW7C58XnriZ'  
'37i9dQZF1DWTdAFB3skWPN'  
'3xMQTDLOIGvj3lWH5e5x6F'  
'1Sc7bobknESH7SXQcnmoX5'  
'0Ar0Ng9DlAWZtSPBv0Qg0a'  
'3tmx4p5RGL0VlAapX0t1Ze'  
'7FqZlaYKkQmVnguJbHuj2a'  
'7ENISp0JhocpMJVcGb0qcT'  
'4RFszTXlSMZFgpgIJS3754'  
'79xd4wnVuKZK4rJMsL2wPa'  
'0dmInkymNn0TWvEFamSNzb'  
'6RLvj50nEuPzI1P02KwnzK'  
'3m4z6komWDtKly3Q1FvFmN'  
'3a9y4eeCJRmG9p4YKfqYIx'  
'4sr2xEhXQR5VuZ0LZX8TQ8'  
'30z5uGyqurJn0NtkZ9e8BT'  
'4mciQwEuqaUMwIWKcDMFW0'  
'7bdhfXlbfml9CuNn5c7372'  
'0WicovBbxEB0nvQC6IfuaT'  
'78RRvktRPMsqAoCI21mN0e'  
'0aS9YCNTNRDiMNA9tT49RG'  
'07SNJ4MwYba9wwmzrbjmYi'  
'0JmBB9HfrzDiZoPVRdv8ns'  
'4F3xAxHxeBwXhK6k6GPnrW'  
'2WbTrS5D0V2TW6DiDkJBru'  
'2ujrP2rPxu8ao7wNeG1Z0Y'  
'48AzM7l4M02DBYd2N3IFLP'  
'16iNEskDatG5KbDV16F6LR'  
'5EMARioe9z9eK0eWIAC2JW'  
'1G0q0NK7g3C0XerNqq7GbL'  
'6nZaTh6K1SwhdELFTmA99C'  
'25ButZrVb1Zj1MJioMs09D'  
'5M7xLCQTYJL0lbKIrUn3a4'  
'6k45gxiQhfVqACfIdq0NsC'  
'54XvQQsViMBwj01ws2o2wx'  
'5GiPRvTccToqw0zkoAcDrY'  
'0AFYmoSuoMQiGGjzvBwr6u'  
'7sq6nuruoMyDhEWkX2oY0g'  
'4GSiiL8tcMgvoV7K1IADb8'  
'3PNyCpkY7NAXyhopBpj7vc'  
'6vbHQdtfmexb0ptmBSpemm'  
'7xWdFCrU5Gka6qp10DrSdK'  
'6mMk6QCzEgT3QGaCV1R4S5'  
'37i9dQZF1DX8SaiEt40VJw'  
'6HaCi9bqaiuSZEDfCEmwyo'  
'4WiB26kw0INKwbzfb5M6Tv'  
'0pItJZBDZFvgA0dFnSITnJ'  
'6VWXakL2ojgiVC01I271e2'  
'37i9dQZF1DX2vsux22VuNL'  
'37i9dQZF1DWTc5QDlvD7t0'  
'7ccXu2NL5YPa7PVgnQxR1j'  
'37i9dQZF1DX4F2k37fMTyn'  
'5XQopnmKZnE6RjR6NIzbPS'  
'2CJsD3fcYJWclIEKnwmovU'  
'37i9dQZF1DX56crgoe4TG3'  
'6kVFIQBhLT4003iw2WWEv1'  
'7ozFIvz1bE1HPgQTUl5qfT'  
'3ykXidKLz1eYPvuGoFlD1e'  
'4sji14lrB5bgcr51lPALYH'  
'3krpccUV68nBGAQbvHEZDC'  
'7LjRWGUdOmBdPG1W1bga4i'  
'1dsaMvnC1hXPCNGC4aVtjj'  
'4nX6BscFtR1CozSCfv2cuR'  
'63Y9Sk7Twusm6ZNssHxKaa'  
'0zn8nuASKC0PISqD9mxCSV'  
'3X4HmijjKdwwLonCr00EAZ'  
'2Ey63yNQeC9Yto7JwX9BGJ'  
'37i9dQZF1DX44dZ4p5QLf4'  
'1eqVgsNjaX6mxDPoefhocT'  
'0r5ojPhjqGVq21oQR13UJy'  
'3q3M4VCymcMoxJ3Tl7mRqN'  
'6FZYc2BvF7tColx08PBShV'  
'44d7ppo4cggZJmzH2W0hAc'  
'2YPP7fiYu5pIcp2yyHvw4A'  
'4zNayWuATXCAA9gaXvnFnq'  
'2wP2UAYC4Nqb6oUXkMJlAz'  
'0DIwiildMI59NIQtINcevy'  
'31700e8iWJLCLLGDKtieRe'  
'37i9dQZF1DX2VvACCrgjrt'  
'3QEYvCsVXZj8KuzE0bDmcI'  
'0wHHL0TLztL3muzXLCDTQP'  
'3Dr4NKbsFQ2m7tmPxGRro0'  
'1N5dPU0Ca9N9AwBbUeyzX5'  
'2Tisn6NZbeofpc570c6MGo'  
'4pVZ70y8vzzkn2GVwQbQw8'  
'6KnQDwp0syvhfH0R4lWP7x'  
'72r6odw0Q30WTCYMGa7Yiy'  
'3S03NwbWkrR1e7DPH9rf9Z'  
'5Bx5niVgi3qGQ0w06C0RKq'  
'2EnVd4ugXUybVQoQrarICY'  
'4Qt02XySphM0Jt7pX0yaVi'  
'08QTrfsYYouffgnPjmlLAQ'  
'4R4c3WdN1Any2Q1NSuec3r'

'2oalsaFUockoPf1DU3wrL8'	'2yofeyPwe0ZNmJHTrGz2Qt'
'0COM4nZqdXC3sMjVdcaU7V'	'71UHE27ayQs8ZDxQwY0cY1'
'5FhhmunkvwTAsGaiXpRHkJ'	'7vJ0XFe40axY7qS39vGDyH'
'6pPpLz42hUkr8gbMirKAEl'	'49EXQVXh5k1t8S0hmUeyU7'
'6SrHyxIxWfQx9ISer6yowk'	'2fbrY1tuoW8Uji14H7623k'
'5CTzufLc0f6MufjKYrIao0'	'4aUEH3uhbofktrFkX00aKj'
'1T0ed6Mg0QIruHvcoWWIKy'	'64k01l4j6QtnZ8jMaI84AA'
'6mtYu0xz158vSGnEDtZ9uB'	'0cvVad4XizGb0S0vlwZYS5'
'5HmZtuuIDMtIy21kylqhx6'	'2DjIfVDXGYDgRxw7IJTKVb'
'37i9dQZF1DWUXxc8Mc6MmJ'	'7CEEEMKV41x0RlFCXWdvKF'
'6UJwlegIcZVfrBmcKs5uHH'	'5EgzhnSirHRvu1AqlFLllv'
'67cpuBAXjwibm3LG3330aq'	'2d3o0P00csDU40JyiGwFaF'
'3d2JFEbvxc7p2CHkBaQeMZ'	'6gHk5RFrnALbDNJdaXKivi'
'2JPzPB9jnvJLAYtmCbvZy8'	'5CMvAWTlDPdZnkleiTHyyo'
'5QaPRbVgbEcCc9jC1UxgD1'	'5PCAWKfUWAUj8VeY8G7xRQ'
'1lSdljPk8zcAdXVMUduDia'	'42jbIN5Zj0UUPdtmqxQRKF'
'7fRlDx99wBg6i450CvxwKY'	'53Ga3Xt9fumdJfhNNSBvzU'
'1HtnPDj2V126xB9tJP786P'	'0MhTMIo1bgH6zzPh7BdChT'
'4IS7o1ut0zhimFEFnj9gmu'	'2dNitDEHM9FpUGEHWc7zyW'
'0o5gKmuET7F3lQnpFxpP08'	'5Bq0ZpVEqRDfZScvW1QUyA'
'0FCHg9zJMNNi0okh3hVcxd'	'73uj4YmsC7SJ6SbUMTvf07'
'29jj7pQlDqnWclbHQk21Rq'	'4N1ipiKR3xla8UXtE12XBm'
'6jIlgFr6ANFtT8MmTvA2Ux']	

Уникальные значения колонки playlist\_genre: ['pop' 'rap' 'rock' 'latin' 'r&b' 'edm']

Уникальные значения колонки playlist\_subgenre: ['dance pop' 'post-teen pop' 'electropop' 'indie pop' 'indie pop optimism' 'hip hop' 'southern hip hop' 'gangster rap' 'trap' 'album rock' 'classic rock' 'permanent wave' 'hard rock' 'tropical' 'latin pop' 'reggaeton' 'latin hip hop' 'urban contemporary' 'hip pop' 'new jack swing' 'neo soul' 'electro house' 'big room' 'pop edm' 'progressive electro house']

Уникальные значения колонки danceability: [0.748 0.726 0.675 0.718 0.65 0.449 0.542 0.594 0.642 0.679 0.437 0.744 0.572 0.69 0.805 0.694 0.678 0.746 0.467 0.708 0.684 0.732 0.62 0.682 0.663 0.625 0.641 0.702 0.723 0.742 0.716 0.816 0.633 0.563 0.728 0.846 0.693 0.67 0.755 0.622 0.789 0.64 0.609 0.75 0.535 0.766 0.649 0.588 0.355 0.735 0.752 0.607 0.714 0.775 0.814 0.784 0.367 0.591 0.59 0.791 0.564 0.669 0.77 0.513 0.72 0.294 0.665 0.46 0.362 0.686 0.618 0.661 0.571 0.652 0.706 0.404 0.876 0.802 0.906 0.753 0.672 0.581 0.643 0.674 0.691 0.653 0.734 0.55 0.703 0.44 0.547 0.673 0.699 0.647 0.655 0.79 0.611 0.619 0.575 0.768 0.767 0.466 0.434 0.837 0.514 0.842 0.509 0.737 0.584 0.743 0.721 0.781 0.57 0.551 0.617 0.503 0.658 0.713 0.596 0.654 0.63 0.532 0.604 0.432 0.638 0.759 0.614 0.851 0.738 0.945 0.704 0.765 0.627 0.762 0.577 0.632 0.598 0.825 0.795 0.529 0.7 0.904 0.772 0.664 0.567 0.534 0.651 0.66 0.608 0.561 0.626 0.745 0.53 0.552 0.471 0.747 0.712 0.733 0.517 0.818 0.639 0.809 0.578 0.845 0.657 0.493 0.687 0.447 0.731 0.489]

0.6	0.711	0.683	0.707	0.502	0.685	0.601	0.448	0.739	0.792
0.645	0.662	0.516	0.382	0.636	0.815	0.696	0.659	0.592	0.689
0.676	0.763	0.605	0.43	0.776	0.621	0.445	0.807	0.717	0.677
0.715	0.497	0.527	0.401	0.724	0.771	0.813	0.719	0.414	0.468
0.465	0.701	0.631	0.671	0.438	0.461	0.446	0.486	0.635	0.361
0.628	0.555	0.722	0.501	0.769	0.787	0.695	0.705	0.803	0.736
0.826	0.836	0.847	0.549	0.425	0.697	0.866	0.554	0.392	0.729
0.834	0.74	0.599	0.539	0.827	0.779	0.751	0.565	0.839	0.782
0.785	0.76	0.566	0.613	0.786	0.616	0.709	0.725	0.58	0.615
0.764	0.832	0.817	0.797	0.602	0.544	0.863	0.612	0.886	0.45
0.428	0.407	0.819	0.688	0.862	0.624	0.518	0.504	0.413	0.634
0.495	0.568	0.81	0.667	0.749	0.796	0.629	0.822	0.424	0.524
0.68	0.852	0.541	0.585	0.741	0.52	0.478	0.646	0.853	0.583
0.893	0.794	0.484	0.51	0.379	0.483	0.84	0.421	0.61	0.773
0.88	0.681	0.727	0.758	0.543	0.71	0.512	0.692	0.387	0.811
0.881	0.637	0.857	0.838	0.808	0.87	0.668	0.872	0.474	0.824
0.754	0.531	0.756	0.553	0.505	0.885	0.393	0.459	0.344	0.856
0.812	0.394	0.793	0.267	0.422	0.848	0.843	0.656	0.576	0.8
0.871	0.979	0.798	0.559	0.757	0.476	0.556	0.545	0.589	0.426
0.54	0.533	0.537	0.528	0.338	0.582	0.399	0.48	0.206	0.494
0.557	0.225	0.595	0.587	0.454	0.573	0.666	0.644	0.806	0.498
0.538	0.586	0.339	0.31	0.383	0.648	0.777	0.522	0.606	0.562
0.558	0.868	0.917	0.316	0.39	0.418	0.345	0.925	0.375	0.373
0.526	0.4	0.488	0.443	0.464	0.348	0.823	0.324	0.835	0.303
0.829	0.929	0.298	0.436	0.472	0.389	0.398	0.457	0.442	0.506
0.27	0.326	0.396	0.477	0.397	0.593	0.452	0.511	0.37	0.889
0.865	0.799	0.462	0.878	0.774	0.508	0.482	0.778	0.314	0.258
0.376	0.603	0.515	0.828	0.574	0.473	0.386	0.499	0.879	0.932
0.78	0.858	0.597	0.469	0.821	0.333	0.783	0.475	0.492	0.875
0.883	0.56	0.321	0.698	0.353	0.351	0.463	0.377	0.429	0.548
0.431	0.41	0.38	0.371	0.357	0.381	0.35	0.308	0.323	0.272
0.388	0.359	0.412	0.521	0.479	0.456	0.341	0.423	0.49	0.455
0.435	0.228	0.204	0.285	0.47	0.444	0.525	0.283	0.364	0.485
0.491	0.623	0.965	0.874	0.309	0.358	0.73	0.378	0.873	0.439
0.882	0.897	0.861	0.519	0.496	0.918	0.268	0.788	0.487	0.569
0.384	0.451	0.255	0.546	0.279	0.334	0.274	0.859	0.411	0.804
0.292	0.909	0.336	0.761	0.854	0.95	0.946	0.898	0.905	0.801
0.849	0.884	0.912	0.579	0.831	0.287	0.536	0.369	0.356	0.833
0.855	0.867	0.926	0.83	0.365	0.894	0.523	0.877	0.408	0.507
0.453	0.458	0.301	0.441	0.286	0.892	0.419	0.347	0.262	0.385
0.891	0.327	0.402	0.953	0.242	0.902	0.5	0.209	0.956	0.908
0.841	0.391	0.915	0.282	0.951	0.366	0.296	0.0985	0.306	0.246
0.118	0.416	0.93	0.936	0.869	0.888	0.238	0.216	0.896	0.313
0.319	0.481	0.42	0.248	0.86	0.887	0.395	0.415	0.963	0.244
0.346	0.92	0.417	0.335	0.403	0.427	0.281	0.405	0.944	0.342
0.36	0.213	0.276	0.3	0.85	0.284	0.229	0.312	0.368	0.406
0.844	0.938	0.919	0.318	0.331	0.372	0.278	0.34	0.235	0.924
0.9	0.302	0.135	0.948	0.178	0.264	0.143	0.26	0.199	0.433
0.32	0.907	0.903	0.914	0.409	0.931	0.337	0.211	0.913	0.94

0.82	0.374	0.923	0.942	0.91	0.895	0.901	0.864	0.927	0.934
0.921	0.943	0.967	0.959	0.974	0.966	0.916	0.952	0.899	0.961
0.975	0.928	0.933	0.935	0.957	0.937	0.941	0.922	0.947	0.277
0.964	0.247	0.252	0.15	0.295	0.293	0.214	0.329	0.231	0.245
0.163	0.955	0.96	0.954	0.89	0.315	0.911	0.243	0.939	0.949
0.97	0.299	0.972	0.971	0.962	0.305	0.253	0.259	0.224	0.317
0.273	0.241	0.263	0.275	0.363	0.271	0.266	0.325	0.236	0.
0.307	0.193	0.166	0.25	0.187	0.24	0.198	0.168	0.208	0.29
0.265	0.256	0.289	0.192	0.23	0.33	0.288	0.191	0.162	0.219
0.194	0.201	0.217	0.249	0.354	0.328	0.155	0.332	0.17	0.234
0.175	0.28	0.195	0.197	0.311	0.257	0.291	0.322	0.221	0.186
0.149	0.349	0.184	0.188	0.304	0.21	0.237	0.223	0.254	0.202
0.22	0.222	0.352	0.297	0.172	0.16	0.261	0.189	0.174	0.232
0.218	0.182	0.173	0.185	0.343	0.215	0.269	0.2	0.13	0.157
0.212	0.179	0.116	0.176	0.141	0.14	0.0771	0.226	0.0787	0.968
0.978	0.147	0.153	0.251	0.973	0.977	0.177	0.165	0.233	0.981
0.969	0.983	]							

Уникальные значения колонки energy: [9.16e-01 8.15e-01 9.31e-01 9.30e-01 8.33e-01 9.19e-01 8.56e-01 9.03e-01

9.35e-01 8.18e-01 9.23e-01 7.74e-01 7.26e-01 9.15e-01 7.80e-01 8.35e-01

9.01e-01 7.47e-01 5.57e-01 8.21e-01 9.34e-01 9.13e-01 8.50e-01 8.89e-01

7.60e-01 8.51e-01 9.05e-01 9.38e-01 9.09e-01 8.69e-01 8.14e-01 8.37e-01

8.64e-01 8.31e-01 8.54e-01 8.10e-01 7.73e-01 6.78e-01 9.28e-01 4.53e-01

8.59e-01 8.93e-01 8.38e-01 7.64e-01 9.92e-01 9.56e-01 7.71e-01 6.97e-01

7.89e-01 8.40e-01 5.00e-01 9.55e-01 9.95e-01 7.86e-01 8.01e-01 8.62e-01

8.67e-01 7.79e-01 7.83e-01 8.30e-01 7.02e-01 6.42e-01 5.65e-01 8.82e-01

7.88e-01 8.58e-01 5.05e-01 7.99e-01 8.00e-01 9.21e-01 6.60e-01 6.99e-01

7.25e-01 7.52e-01 7.05e-01 8.98e-01 8.55e-01 8.06e-01 6.45e-01 8.32e-01

6.57e-01 6.74e-01 5.94e-01 8.81e-01 5.38e-01 7.58e-01 6.90e-01 6.93e-01

6.96e-01 8.99e-01 8.68e-01 6.35e-01 7.07e-01 7.19e-01 7.95e-01 5.96e-01

6.33e-01 6.70e-01 4.27e-01 8.65e-01 7.37e-01 7.63e-01 8.08e-01 6.05e-01

6.12e-01 9.17e-01 7.90e-01 6.22e-01 5.24e-01 6.24e-01 7.81e-01 6.36e-01

5.40e-01 7.33e-01 7.16e-01 7.68e-01 8.28e-01 6.51e-01 7.48e-01 5.33e-01

6.77e-01 8.02e-01 7.38e-01 7.27e-01 7.70e-01 7.87e-01 7.40e-01 6.72e-01



8.90e-01	5.84e-01	9.29e-01	9.06e-01	6.62e-01	7.36e-01	8.44e-01	8.16e-01
5.26e-01	8.41e-01	7.31e-01	7.17e-01	8.72e-01	5.41e-01	6.87e-01	7.45e-01
5.47e-01	7.97e-01	9.46e-01	7.57e-01	7.65e-01	8.27e-01	9.65e-01	9.18e-01
5.62e-01	8.80e-01	8.57e-01	7.29e-01	8.87e-01	9.11e-01	7.76e-01	6.64e-01
7.93e-01	8.23e-01	5.91e-01	7.21e-01	8.39e-01	7.66e-01	8.66e-01	7.06e-01
8.74e-01	6.84e-01	8.88e-01	7.24e-01	5.75e-01	7.85e-01	5.74e-01	8.79e-01
7.46e-01	7.18e-01	8.48e-01	7.08e-01	7.12e-01	7.75e-01	6.65e-01	9.50e-01
8.19e-01	8.36e-01	6.46e-01	8.95e-01	8.85e-01	6.13e-01	7.54e-01	6.98e-01
8.25e-01	6.30e-01	6.47e-01	9.07e-01	6.17e-01	8.73e-01	5.85e-01	5.82e-01
9.24e-01	5.23e-01	6.06e-01	7.23e-01	7.13e-01	7.34e-01	7.35e-01	8.46e-01
8.09e-01	6.56e-01	5.97e-01	4.97e-01	7.41e-01	7.94e-01	8.26e-01	8.34e-01
7.61e-01	7.04e-01	4.86e-01	4.71e-01	6.89e-01	7.22e-01	9.68e-01	7.39e-01
4.25e-01	9.39e-01	9.10e-01	7.92e-01	7.11e-01	9.14e-01	9.54e-01	5.73e-01
9.00e-01	7.91e-01	9.45e-01	9.43e-01	5.93e-01	8.13e-01	7.44e-01	5.19e-01
8.17e-01	8.05e-01	8.63e-01	6.66e-01	5.69e-01	5.20e-01	7.14e-01	9.61e-01
9.93e-01	5.88e-01	6.73e-01	5.12e-01	8.47e-01	5.60e-01	4.63e-01	7.82e-01
8.91e-01	7.28e-01	6.14e-01	7.09e-01	5.50e-01	6.37e-01	9.27e-01	7.50e-01
9.64e-01	9.02e-01	8.70e-01	7.69e-01	8.42e-01	8.53e-01	9.79e-01	5.43e-01
9.60e-01	8.04e-01	9.40e-01	8.94e-01	9.04e-01	8.83e-01	8.97e-01	9.26e-01
8.20e-01	6.53e-01	6.16e-01	7.30e-01	8.11e-01	8.84e-01	6.88e-01	5.83e-01
8.60e-01	6.68e-01	6.07e-01	6.52e-01	6.43e-01	7.00e-01	8.12e-01	7.72e-01
5.03e-01	5.09e-01	4.29e-01	4.54e-01	6.94e-01	9.25e-01	4.68e-01	5.25e-01
5.21e-01	7.98e-01	5.98e-01	6.44e-01	6.59e-01	6.67e-01	6.85e-01	7.32e-01
9.77e-01	6.25e-01	5.67e-01	4.77e-01	6.61e-01	7.84e-01	6.69e-01	7.53e-01
5.64e-01	7.55e-01	7.10e-01	7.51e-01	7.42e-01	8.61e-01	6.82e-01	5.07e-01

01  
6.21e-01 6.23e-01 5.71e-01 6.01e-01 4.16e-01 7.15e-01 2.25e-01 6.08e-  
01  
6.50e-01 5.45e-01 3.20e-01 7.96e-01 4.05e-01 5.79e-01 6.31e-01 5.68e-  
01  
6.03e-01 2.09e-01 3.40e-01 5.17e-01 3.08e-01 9.80e-01 9.69e-01 9.48e-  
01  
9.44e-01 6.28e-01 2.10e-01 9.81e-01 9.08e-01 8.75e-01 9.41e-01 6.71e-  
01  
9.51e-01 9.53e-01 9.75e-01 9.37e-01 9.33e-01 5.51e-01 9.74e-01 4.30e-  
01  
9.47e-01 9.99e-01 9.66e-01 9.88e-01 9.42e-01 8.22e-01 9.98e-01 8.29e-  
01  
9.96e-01 8.78e-01 9.63e-01 8.43e-01 5.46e-01 5.52e-01 6.83e-01 3.30e-  
01  
5.92e-01 6.34e-01 4.12e-01 6.11e-01 7.59e-01 7.62e-01 6.86e-01 7.77e-  
01  
9.62e-01 7.56e-01 5.36e-01 8.92e-01 8.77e-01 5.01e-01 6.32e-01 5.99e-  
01  
7.03e-01 7.43e-01 5.78e-01 9.36e-01 8.03e-01 9.32e-01 6.29e-01 7.20e-  
01  
7.67e-01 6.09e-01 5.28e-01 4.59e-01 5.70e-01 9.49e-01 6.27e-01 7.78e-  
01  
6.76e-01 4.37e-01 6.75e-01 8.24e-01 4.82e-01 8.49e-01 9.20e-01 6.00e-  
01  
2.57e-01 8.71e-01 2.55e-01 3.13e-01 5.48e-01 4.28e-01 3.04e-01 3.89e-  
01  
5.49e-01 1.72e-01 5.55e-01 2.51e-01 4.76e-01 2.63e-01 4.11e-01 4.81e-  
01  
6.95e-01 4.20e-01 4.35e-01 3.86e-01 5.59e-01 1.82e-01 5.72e-01 3.65e-  
01  
1.12e-01 1.99e-01 6.39e-01 5.22e-01 4.14e-01 5.90e-01 4.40e-01 2.83e-  
01  
5.29e-01 4.00e-01 4.55e-01 2.14e-01 3.39e-01 8.07e-01 3.28e-01 2.31e-  
01  
3.25e-01 6.26e-01 3.45e-01 6.81e-01 4.34e-01 5.02e-01 7.49e-01 9.57e-  
01  
4.49e-01 1.96e-01 6.40e-01 3.21e-01 6.49e-01 3.97e-01 4.38e-01 2.64e-  
01  
4.70e-01 4.98e-01 6.63e-01 6.48e-01 1.47e-01 4.51e-01 2.89e-01 6.20e-  
01  
3.91e-01 6.19e-01 4.66e-01 1.86e-01 4.48e-01 4.08e-01 5.58e-01 4.88e-  
01  
5.80e-01 4.41e-01 2.67e-01 6.41e-01 4.67e-01 4.91e-01 2.90e-01 8.45e-  
01  
5.30e-01 6.58e-01 4.07e-01 4.43e-01 9.22e-01 4.10e-01 1.67e-01 4.58e-  
01  
4.24e-01 2.79e-01 8.14e-03 9.17e-02 3.49e-01 4.95e-01 3.50e-01 2.85e-  
01

3.42e-01	3.05e-01	3.43e-01	5.66e-01	4.64e-01	4.73e-01	1.54e-01	4.96e-01
2.60e-01	5.53e-01	5.11e-01	5.10e-01	9.59e-01	3.57e-01	4.92e-01	9.82e-01
9.67e-01	4.22e-01	3.71e-01	9.58e-01	4.84e-01	8.86e-01	8.96e-01	6.10e-01
5.06e-01	5.44e-01	2.91e-01	4.79e-01	4.85e-01	4.89e-01	3.79e-01	6.15e-01
4.93e-01	3.88e-01	3.17e-01	4.61e-01	5.54e-01	5.76e-01	8.52e-01	6.38e-01
5.42e-01	3.82e-01	5.87e-01	4.36e-01	6.55e-01	9.87e-01	4.62e-01	4.72e-01
5.14e-01	4.23e-01	3.98e-01	4.78e-01	5.04e-01	4.39e-01	4.75e-01	3.51e-01
5.81e-01	6.18e-01	6.80e-01	1.46e-01	4.56e-01	3.99e-01	3.69e-01	4.50e-01
3.19e-01	6.02e-01	4.69e-01	4.57e-01	8.76e-01	6.92e-01	5.95e-01	5.86e-01
4.46e-01	5.89e-01	6.04e-01	5.39e-01	4.06e-01	4.80e-01	5.35e-01	3.12e-01
3.64e-01	2.69e-01	4.45e-01	3.46e-01	4.31e-01	6.79e-01	4.60e-01	7.01e-01
5.31e-01	4.74e-01	6.91e-01	4.18e-01	5.32e-01	3.27e-01	5.63e-01	3.96e-01
9.72e-01	2.68e-01	9.71e-01	5.16e-01	2.03e-01	3.56e-01	3.73e-01	5.18e-01
4.13e-01	4.33e-01	4.65e-01	3.47e-01	8.79e-02	6.92e-02	9.83e-01	2.35e-01
4.19e-01	3.92e-01	3.38e-01	5.56e-01	3.81e-01	4.32e-01	3.33e-01	5.34e-01
3.61e-01	9.48e-02	9.58e-02	5.61e-01	3.54e-01	4.04e-01	4.42e-01	4.83e-01
9.76e-01	9.86e-01	9.12e-01	2.40e-01	3.80e-01	9.85e-01	9.97e-01	3.31e-01
9.90e-01	9.89e-01	9.52e-01	9.94e-01	4.99e-01	2.95e-01	2.71e-01	6.54e-01
3.87e-01	9.73e-01	2.75e-01	2.96e-01	1.89e-01	2.29e-01	2.92e-01	2.52e-01
3.06e-01	3.22e-01	5.37e-01	5.15e-01	4.47e-01	3.11e-01	4.87e-01	4.94e-01
5.27e-01	2.54e-01	3.48e-01	3.37e-01	2.22e-01	3.76e-01	3.66e-01	3.63e-01
1.93e-01	2.76e-01	3.84e-01	1.95e-01	4.15e-01	1.35e-01	1.77e-01	1.98e-01
3.52e-01	3.16e-01	3.44e-01	3.32e-01	2.98e-01	2.46e-01	3.77e-01	1.85e-01
1.39e-01	2.93e-01	4.90e-01	1.57e-01	2.16e-01	2.88e-01	2.12e-01	3.70e-01
3.83e-01	2.80e-01	2.21e-01	2.72e-01	3.24e-01	2.38e-01	1.69e-01	3.53e-01

01  
3.59e-01 3.60e-01 1.60e-01 2.37e-01 2.99e-01 3.02e-01 3.94e-01 2.47e-  
01  
3.34e-01 8.73e-02 4.44e-01 2.61e-01 2.77e-01 4.26e-01 9.91e-01 3.29e-  
01  
2.43e-01 3.72e-01 3.55e-01 2.48e-01 5.13e-01 3.62e-01 3.15e-01 3.90e-  
01  
3.00e-01 5.08e-01 3.01e-01 4.17e-01 3.07e-01 2.06e-01 4.36e-02 5.12e-  
02  
1.15e-01 1.88e-01 4.21e-01 2.94e-01 3.58e-01 3.68e-01 1.78e-01 4.09e-  
01  
2.87e-01 8.11e-02 5.81e-02 2.05e-01 3.75e-01 1.11e-01 7.72e-02 1.83e-  
01  
1.01e-01 1.26e-01 5.33e-02 1.91e-01 4.03e-01 5.77e-01 2.44e-01 2.45e-  
01  
3.41e-01 2.19e-01 1.23e-01 3.36e-01 3.18e-01 1.50e-01 2.36e-01 1.61e-  
01  
1.97e-01 1.36e-01 4.02e-01 6.74e-02 2.24e-01 3.14e-01 9.86e-02 4.52e-  
01  
1.90e-01 1.66e-01 1.76e-01 2.62e-01 2.66e-01 2.28e-01 1.79e-01 6.71e-  
02  
1.33e-01 1.48e-01 3.83e-02 2.42e-01 1.92e-01 1.61e-02 3.89e-02 2.17e-  
01  
1.65e-01 2.02e-01 2.11e-01 3.75e-02 2.07e-01 1.24e-01 2.65e-01 2.58e-  
01  
1.03e-01 1.05e-01 2.23e-01 1.87e-01 8.81e-02 1.94e-01 1.49e-01 9.24e-  
02  
7.53e-02 6.44e-02 8.74e-02 3.09e-01 1.70e-01 8.32e-02 2.13e-01 2.32e-  
01  
2.27e-01 3.10e-01 1.34e-01 2.34e-01 2.00e-01 1.44e-01 1.30e-01 6.68e-  
02  
7.01e-02 1.64e-01 5.26e-02 2.41e-01 1.41e-01 1.75e-01 3.23e-01 2.26e-  
01  
1.52e-01 2.53e-01 1.16e-01 2.04e-01 1.55e-01 1.37e-01 2.56e-01 2.73e-  
01  
2.39e-01 2.59e-01 7.13e-02 9.78e-01 3.93e-01 2.20e-01 3.95e-01 4.01e-  
01  
2.74e-01 1.71e-01 3.85e-01 3.74e-01 2.08e-01 3.03e-01 2.70e-01 9.70e-  
01  
9.84e-01 8.62e-02 6.09e-02 1.04e-01 2.84e-01 1.32e-01 8.67e-02 2.86e-  
01  
3.35e-01 1.51e-01 8.97e-02 2.97e-01 2.81e-01 7.25e-02 4.55e-02 7.65e-  
02  
1.59e-01 1.40e-01 3.78e-01 3.67e-01 2.18e-01 1.45e-01 2.78e-01 1.29e-  
01  
8.61e-02 6.95e-02 9.28e-02 1.84e-01 1.74e-01 1.07e-01 1.67e-02 2.82e-  
01  
1.27e-01 1.68e-01 9.26e-02 2.50e-01 1.00e+00 1.75e-04 6.03e-02 7.47e-  
02

```

1.28e-01 3.26e-01 2.01e-01 2.15e-01 1.56e-01 2.97e-02 1.13e-01 1.31e-
01
1.38e-01 1.25e-01 3.60e-02 1.18e-02 2.33e-01 1.81e-01 2.30e-01 5.65e-
02
6.47e-02 5.86e-02 5.61e-02 1.22e-01 1.53e-01 1.62e-01 9.52e-02 2.49e-
01
7.50e-02 8.48e-02 8.23e-02 2.86e-02 7.97e-02 7.67e-02 6.58e-02 3.23e-
02
1.21e-01 8.58e-02 9.04e-02 1.08e-01 1.43e-01 1.42e-01 4.74e-02 1.06e-
01]
Уникальные значения колонки key: [ 6 11  1  7  8  5  4  2  0 10  9  3]
Уникальные значения колонки loudness: [-2.634 -4.969 -3.432 ... -3.312
-0.378 -1.814]
Уникальные значения колонки mode: [1 0]
Уникальные значения колонки speechiness: [0.0583 0.0373 0.0742 ...
0.0231 0.624  0.578 ]
Уникальные значения колонки acousticness: [1.02e-01 7.24e-02 7.94e-
02 ... 6.26e-04 4.77e-05 4.34e-04]
Уникальные значения колонки instrumentalness: [0.00e+00 4.21e-03
2.33e-05 ... 8.05e-04 4.67e-05 8.35e-03]
Уникальные значения колонки liveness: [0.0653 0.357  0.11  ... 0.0323
0.74  0.787 ]
Уникальные значения колонки valence: [0.518  0.693  0.613  ... 0.0639
0.05  0.0927]
Уникальные значения колонки tempo: [122.036  99.972 124.008 ...
132.048 112.028 128.17 ]
Уникальные значения колонки duration_ms: [194754 162600 176616 ...
353120 210112 367432]

```

Сортировка датасета по указанной колонке в возрастающем порядке

```

sorted_dataset = dataset.sort_values(by=["track_popularity"],
ascending=True)
print(sorted_dataset)

```

	track_id	track_name	
track_artist \			
11645	3mXBM0LLk0bemiuCHyvQ9S	El Laberinto - Live	Miguel
Rios			
18994	4EoDcHQ7l0j4RGgRibFLXh	Un Sueño	R.K.M & Ken-
Y			
19127	4YAcCjGlRfpcFLyxiI54K7	No Es Culpa Mía	
DY			
19160	76tsb1MlePUaN0Y3R8w0K0	Web Cam	
Farruko			
19168	54rF70kHKlNJFuePn7sBsJ	Sexo Seguro	Franco "El
Gorilla"			
...	...	...	..
.			

21468	696DnlkuD0XcMAAnKlTgXXK	ROXANNE	Arizona
Zervas			
20092	696DnlkuD0XcMAAnKlTgXXK	ROXANNE	Arizona
Zervas			
23104	696DnlkuD0XcMAAnKlTgXXK	ROXANNE	Arizona
Zervas			
1551	2XU0oxnq2qx CpomAAuJY8K	Dance Monkey	Tones and I
20091	2XU0oxnq2qx CpomAAuJY8K	Dance Monkey	Tones and I

	track_popularity	track_album_release_date	\
11645	0	2005-01-01	
18994	0	2007-01-01	
19127	0	2017-05-24	
19160	0	2015-08-28	
19168	0	2009-01-01	
...	...	...	
21468	99	2019-10-10	
20092	99	2019-10-10	
23104	99	2019-10-10	
1551	100	2019-10-17	
20091	100	2019-10-17	

	playlist_name	\
11645	Rock and Rios	
18994	Reggaeton Classics	
19127	Reggaeton De Ayer	
19160	Reggaeton De Ayer	
19168	Reggaeton De Ayer	
...	...	
21468	Contemporary Urban	
20092	Global Top 50   2020 Hits	
23104	Charts 2020 🎧 Top 2020 🎧 Hits 2020 🎧 Summer 2020 🎧 Po...	
1551	post-teen alternative, indie, pop (large variety)	
20091	Global Top 50   2020 Hits	

	playlist_id	playlist_genre	playlist_subgenre	\
11645	2gpKfzXEi8QWvgBNPDPk5R	rock	album rock	
18994	37i9dQZF1DX8SfyqmSFDwe	latin	reggaeton	
19127	37i9dQZF1DWWU6Rfto8Ppm	latin	reggaeton	
19160	37i9dQZF1DWWU6Rfto8Ppm	latin	reggaeton	
19168	37i9dQZF1DWWU6Rfto8Ppm	latin	reggaeton	
...	...	...	...	
21468	6wyJ4bsjZaUKa9f6GeZlA0	r&b	urban contemporary	
20092	1KNl4AYfgZt0Vm9KHkhPTF	latin	latin hip hop	
23104	3xMQTDL0IGvj3lWH5e5x6F	r&b	hip pop	
1551	1y42gwI5cuwjBsIPyQNfqB	pop	post-teen pop	
20091	1KNl4AYfgZt0Vm9KHkhPTF	latin	latin hip hop	

	danceability	...	key	loudness	mode	speechiness
acousticness \						
11645	0.449	...	11	-9.207	0	0.0590
0.0122						
18994	0.794	...	1	-4.959	1	0.0622
0.1570						
19127	0.805	...	10	-4.337	1	0.0986
0.4370						
19160	0.746	...	7	-7.085	1	0.0504
0.2100						
19168	0.748	...	4	-6.230	0	0.0905
0.0853						
...	...	...	...	...	...	...
..						
21468	0.621	...	6	-5.616	0	0.1480
0.0522						
20092	0.621	...	6	-5.616	0	0.1480
0.0522						
23104	0.621	...	6	-5.616	0	0.1480
0.0522						
1551	0.824	...	6	-6.400	0	0.0924
0.6920						
20091	0.824	...	6	-6.400	0	0.0924
0.6920						

	instrumentalness	liveness	valence	tempo	duration_ms
11645	0.000000	0.4150	0.558	185.327	51853
18994	0.033200	0.3090	0.805	95.006	245427
19127	0.000001	0.0798	0.714	94.053	107572
19160	0.000000	0.3830	0.542	80.989	206639
19168	0.000000	0.1080	0.585	97.015	218507
...	...	...	...	...	...
21468	0.000000	0.4600	0.457	116.735	163636
20092	0.000000	0.4600	0.457	116.735	163636
23104	0.000000	0.4600	0.457	116.735	163636
1551	0.000104	0.1490	0.513	98.027	209438
20091	0.000104	0.1490	0.513	98.027	209438

[32833 rows x 21 columns]

Для удаления указанных колонок из датасета используется метод `.drop(columns=[])`.

```
dataset = dataset.drop(columns=["duration_ms", "tempo"])
```

Происходит удаление повторяющихся строк из датасета с помощью метода `drop_duplicates()`.

```
dataset = dataset.drop_duplicates()
```

Происходит замена значений в указанной колонке на новые значения с помощью метода `replace()`

```
dataset = dataset.replace({"track_album_id": {'track_album_id':  
'track_album_id1'}})
```

Вывод информации о датасете (названия колонок, типы данных, использование памяти)Генерация описательных статистик для датасета

max - максимальное значение min - минимальное значение std - это мера разброса значений в наборе данных относительно их среднего значения. count - количество элементов в наборе данных mean - среднее значение, то есть сумма всех значений, разделенная на количество значений

```
dataset.info()
```

```
dataset.describe()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 32833 entries, 0 to 32832
```

```
Data columns (total 19 columns):
```

#	Column	Non-Null	Count	Dtype
0	track_id	32833	non-null	object
1	track_name	32828	non-null	object
2	track_artist	32828	non-null	object
3	track_popularity	32833	non-null	int64
4	track_album_release_date	32833	non-null	object
5	playlist_name	32833	non-null	object
6	playlist_id	32833	non-null	object
7	playlist_genre	32833	non-null	object
8	playlist_subgenre	32833	non-null	object
9	danceability	32833	non-null	float64
10	energy	32833	non-null	float64
11	key	32833	non-null	int64
12	loudness	32833	non-null	float64
13	mode	32833	non-null	int64
14	speechiness	32833	non-null	float64
15	acousticness	32833	non-null	float64
16	instrumentalness	32833	non-null	float64
17	liveness	32833	non-null	float64
18	valence	32833	non-null	float64

```
dtypes: float64(8), int64(3), object(8)
```

```
memory usage: 4.8+ MB
```

	track_popularity	danceability	energy	key	\
count	32833.000000	32833.000000	32833.000000	32833.000000	
mean	42.477081	0.654850	0.698619	5.374471	
std	24.984074	0.145085	0.180910	3.611657	
min	0.000000	0.000000	0.000175	0.000000	



25%	24.000000	0.563000	0.581000	2.000000
50%	45.000000	0.672000	0.721000	6.000000
75%	62.000000	0.761000	0.840000	9.000000
max	100.000000	0.983000	1.000000	11.000000

	loudness	mode	speechiness	acousticness \
count	32833.000000	32833.000000	32833.000000	32833.000000
mean	-6.719499	0.565711	0.107068	0.175334
std	2.988436	0.495671	0.101314	0.219633
min	-46.448000	0.000000	0.000000	0.000000
25%	-8.171000	0.000000	0.041000	0.015100
50%	-6.166000	1.000000	0.062500	0.080400
75%	-4.645000	1.000000	0.132000	0.255000
max	1.275000	1.000000	0.918000	0.994000

	instrumentalness	liveness	valence
count	32833.000000	32833.000000	32833.000000
mean	0.084747	0.190176	0.510561
std	0.224230	0.154317	0.233146
min	0.000000	0.000000	0.000000
25%	0.000000	0.092700	0.331000
50%	0.000016	0.127000	0.512000
75%	0.004830	0.248000	0.693000
max	0.994000	0.996000	0.991000

Выборка определенных данных на основе индексов строк и колонок  
Сохранение измененного датасета в новый CSV файл

```
selected_data = dataset.loc[[1,3,6],['track_name',
'track_album_release_date']]
```

```
dataset.to_csv("file1.csv", index=False)
```

Вывод: был реализован базовый анализ датасета.

Создание линейных графиков

Построения графика, отображаем зависимость между переменными в датасете. График помогает визуализировать и анализировать данные, чтобы понять, есть ли какая-либо связь между этими переменными.

```
import matplotlib.pyplot as plt
import pandas as pd

# Чтение данных из файла
data = pd.read_csv('file.csv')

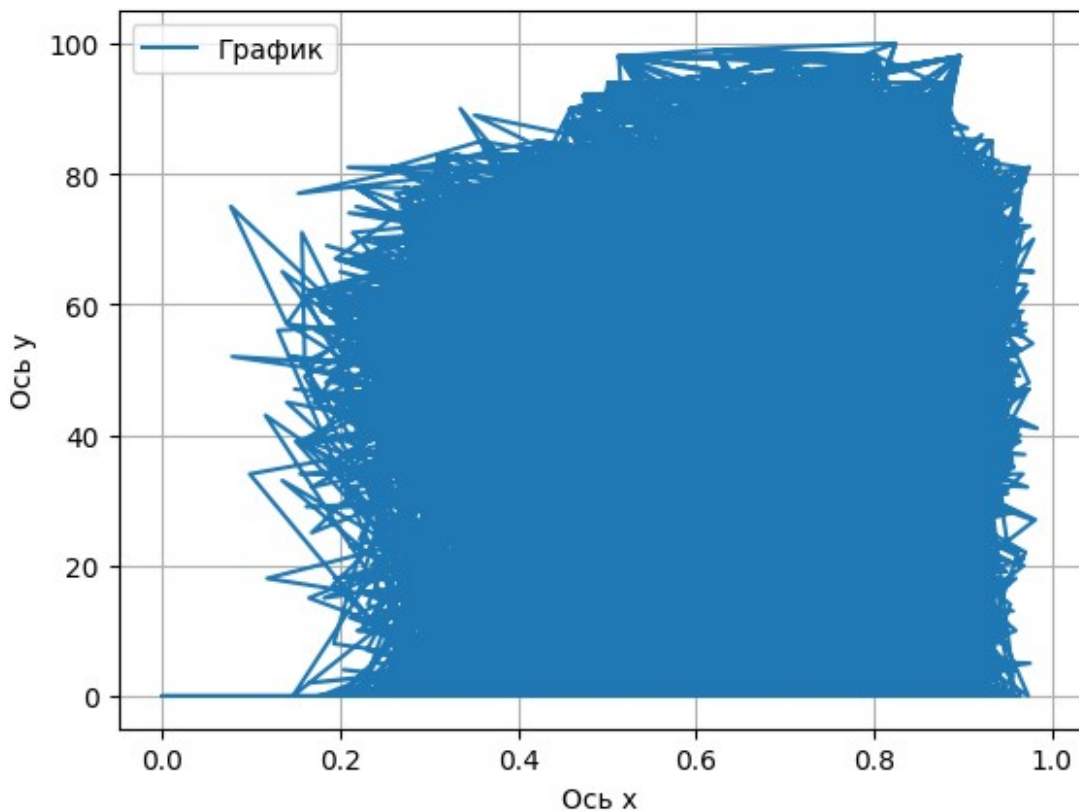
# Замена переменных x и y значениями из датасета
```

```

x = data['danceability']
y = data['track_popularity']

# Построение графика
plt.plot(x, y, label='График')
plt.xlabel('Ось x')
plt.ylabel('Ось y')
plt.grid()
plt.legend()
plt.show()

```



```

import matplotlib.pyplot as plt
import pandas as pd

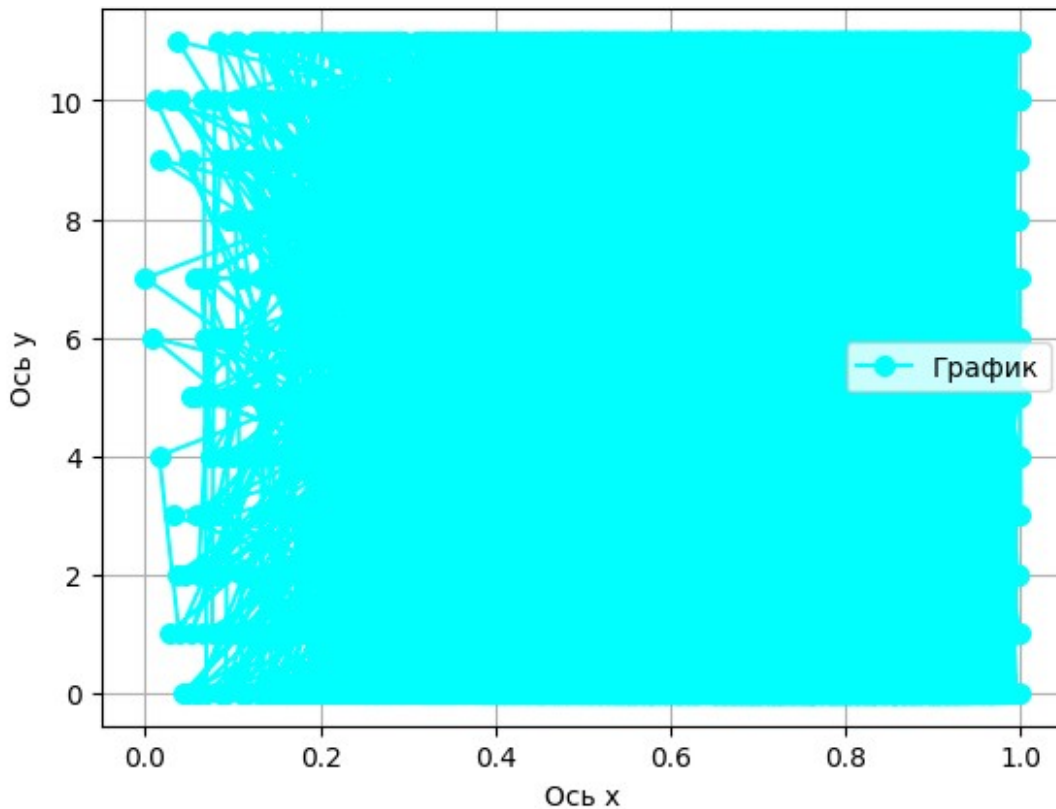
# Чтение данных из файла
data = pd.read_csv('file.csv')

# Извлечение значений из датасета
x = data['energy']
y = data['key']

# Построение графика
plt.plot(x, y, color='cyan', marker='o', markersize=7, label='График')
plt.xlabel('Ось x')

```

```
plt.ylabel('Ось y')
plt.grid()
plt.legend()
plt.show()
```

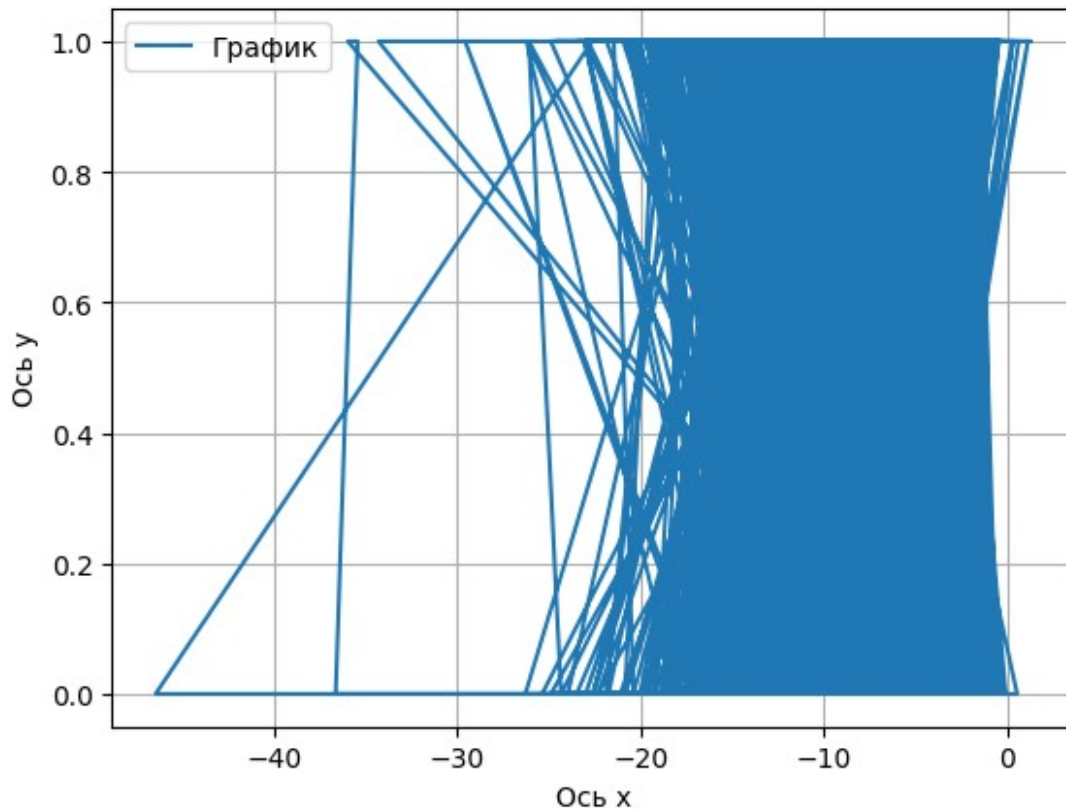


```
import matplotlib.pyplot as plt
import pandas as pd

# Чтение данных из файла
data = pd.read_csv('file.csv')

# Извлечение значений из датасета
x = data['loudness']
y = data['mode']

# Построение графика
plt.plot(x, y, label='График')
plt.xlabel('Ось x')
plt.ylabel('Ось y')
plt.grid()
plt.legend()
plt.show()
```



### Создание столбчатой диаграммы

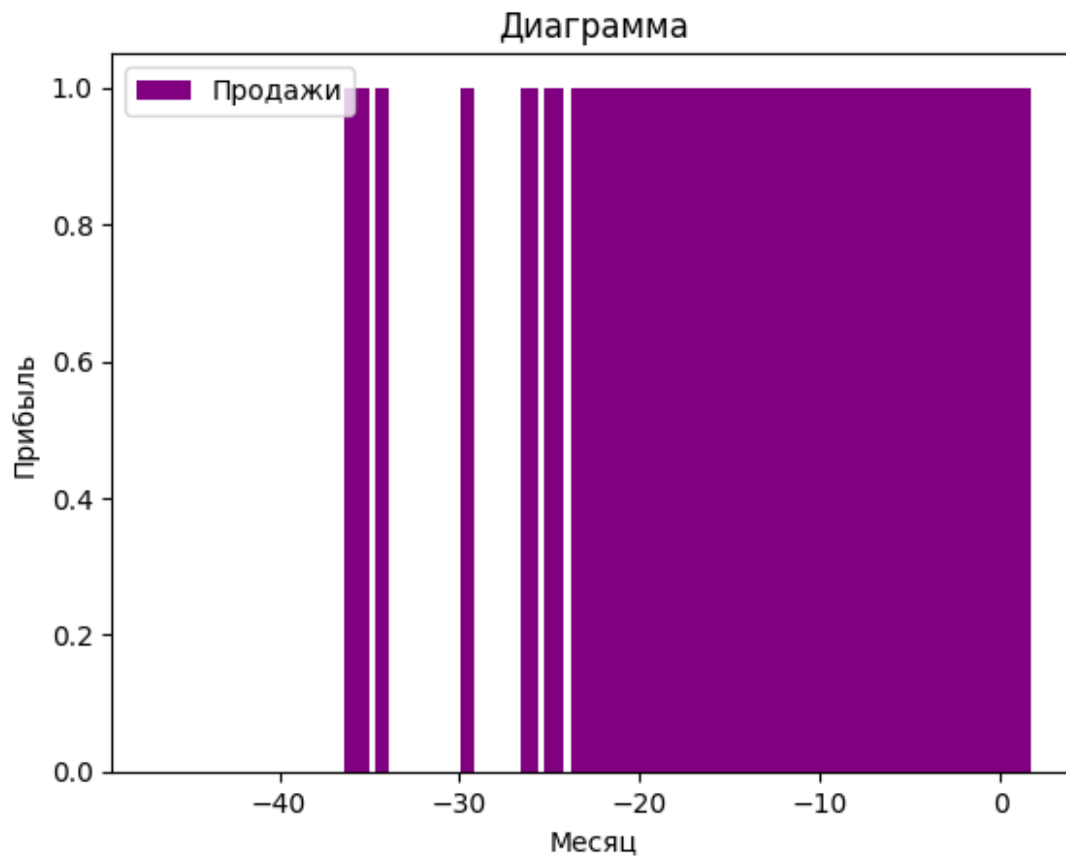
Создания столбчатых диаграмм, отображаем значения переменных по оси x и по оси y. Эта диаграмма позволяет визуально сравнить значения двух переменных и сделать выводы о возможной связи между ними или о распределении данных.

```
import matplotlib.pyplot as plt

data = pd.read_csv('file.csv')

# Извлечение значений из датасета
x = data['loudness']
y = data['mode']

plt.bar(x,y, label = 'Продажи', color = 'purple')
plt.xlabel('Месяц')
plt.ylabel('Прибыль')
plt.title('Диаграмма')
plt.legend()
plt.show()
```

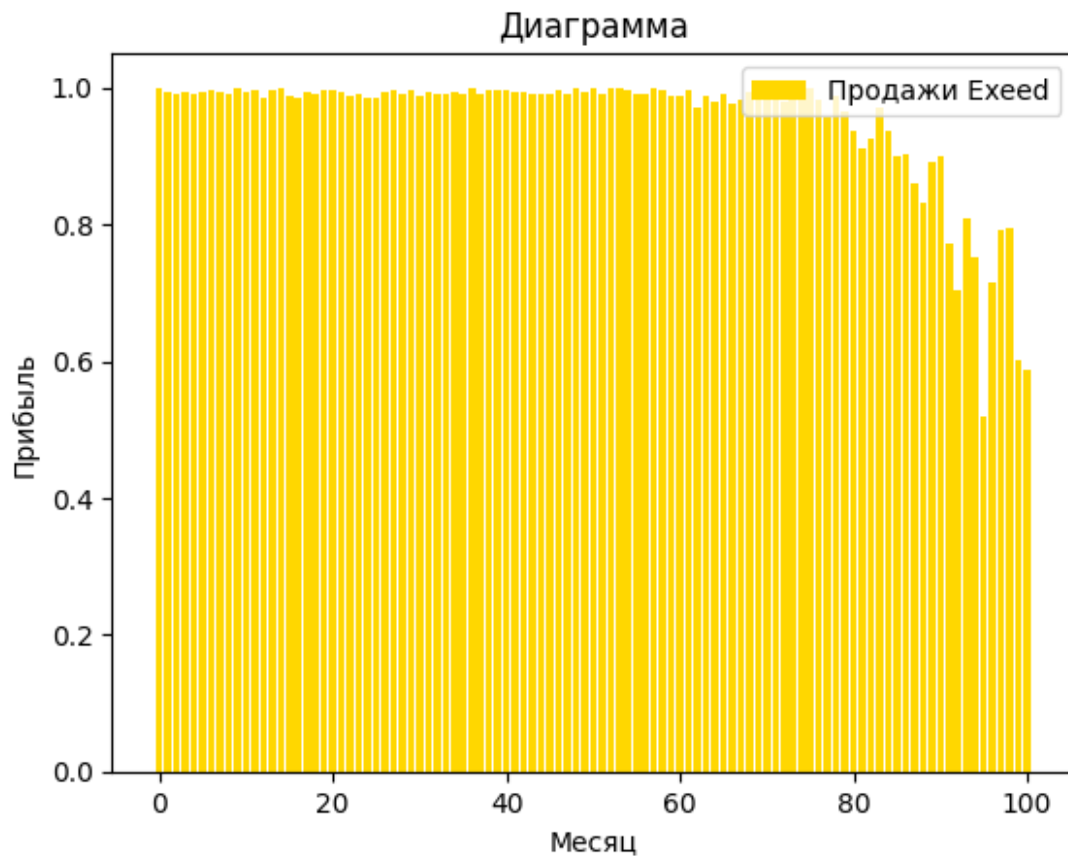


```
import matplotlib.pyplot as plt

data = pd.read_csv('file.csv')

# Извлечение значений из датасета
x = data['track_popularity']
y = data['energy']

plt.bar(x,y, label = 'Продажи Exeed', color = 'gold')
plt.xlabel('Месяц')
plt.ylabel('Прибыль')
plt.title('Диаграмма')
plt.legend()
plt.show()
```

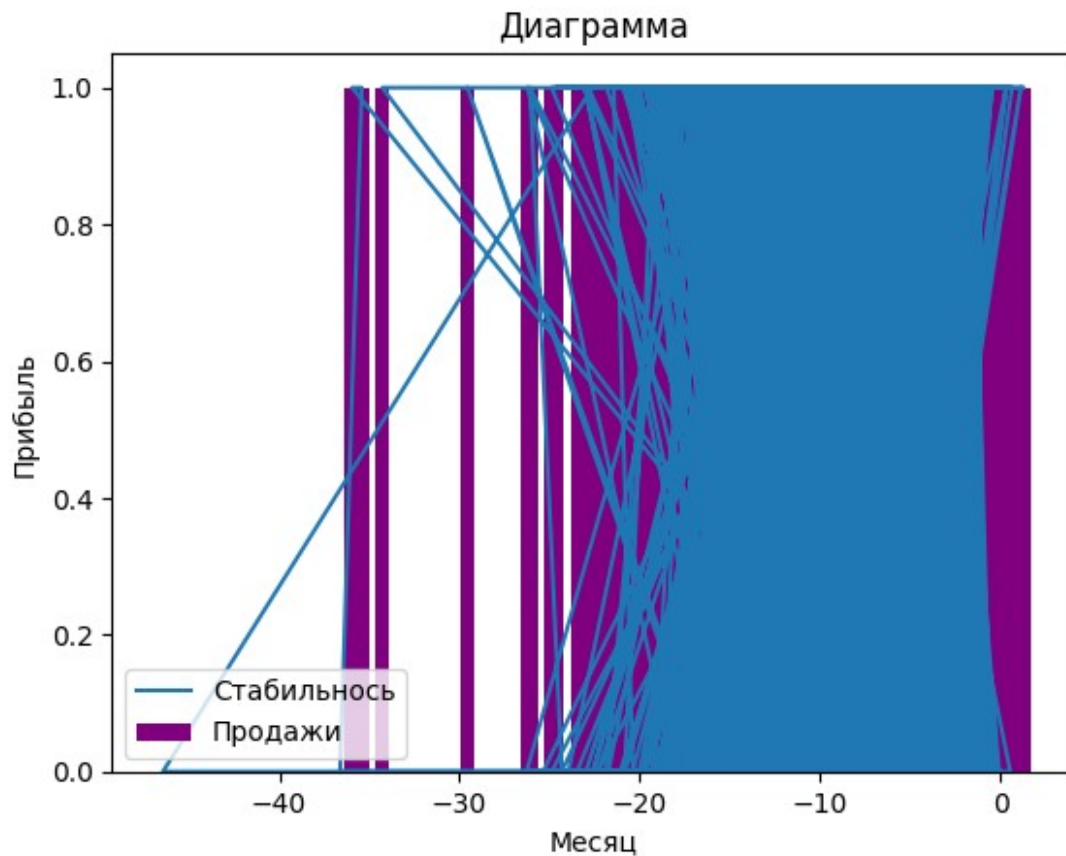


```
import matplotlib.pyplot as plt

data = pd.read_csv('file.csv')

x = data['loudness']
y = data['mode']

plt.bar(x,y, label = 'Продажи', color = 'purple')
plt.plot(x,y, label = 'Стабильность')
plt.xlabel('Месяц')
plt.ylabel('Прибыль')
plt.title('Диаграмма')
plt.legend()
plt.show()
```



Создание круговой диаграммы

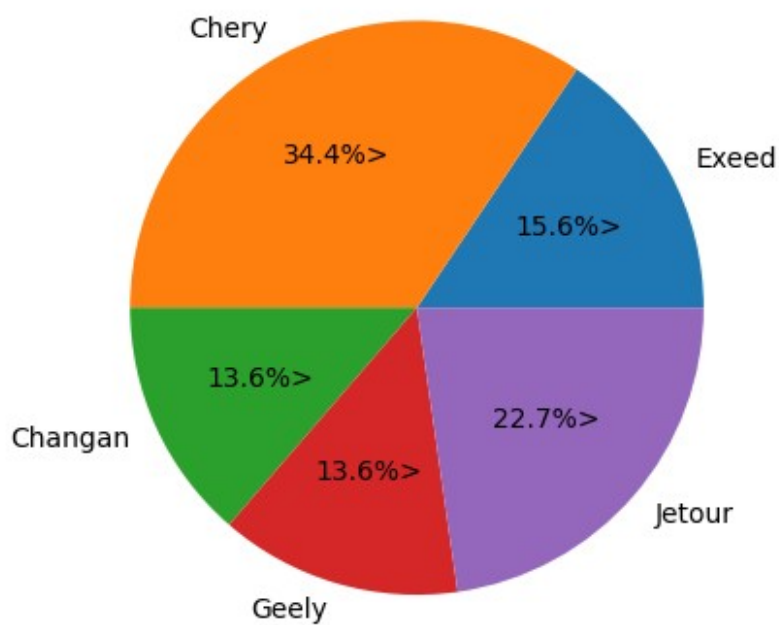
Создание круговой диаграммы. Диаграммы отображают популярность автомобильных марок. Каждая марка представлена своим процентным соотношением от общего количества.

```
vals = [24, 53, 21, 21, 35]
labels = ["Exeed", "Chery", "Changan", "Geely", "Jetour"]

plt.pie(vals, labels=labels, autopct='%1.1f%%>' )

plt.title("Популярность автомобильных марок")
plt.show( )
```

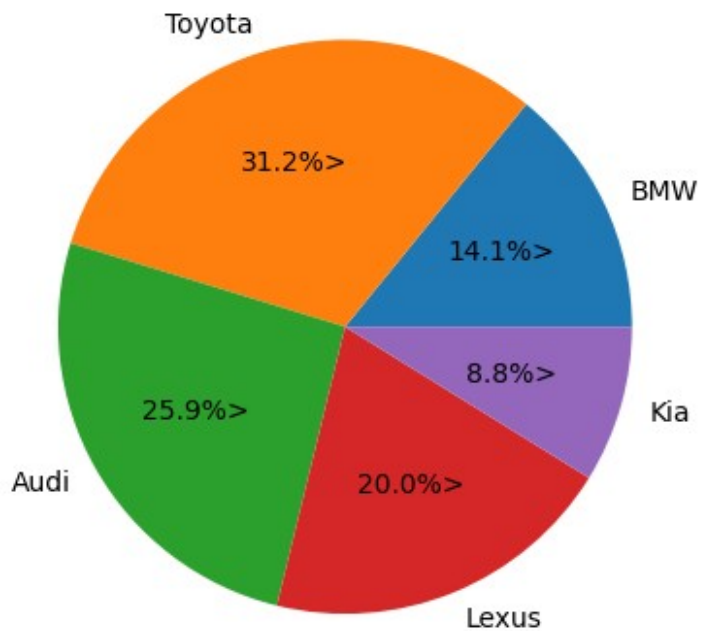
## Популярность автомобильных марок



```
vals = [24, 53, 44, 34, 15]
labels = ["BMW", "Toyota", "Audi", "Lexus", "Kia"]
plt.pie(vals, labels=labels, autopct='%1.1f%%>')
plt.title("Самые аварийные автомобильные марки")
plt.show()
```



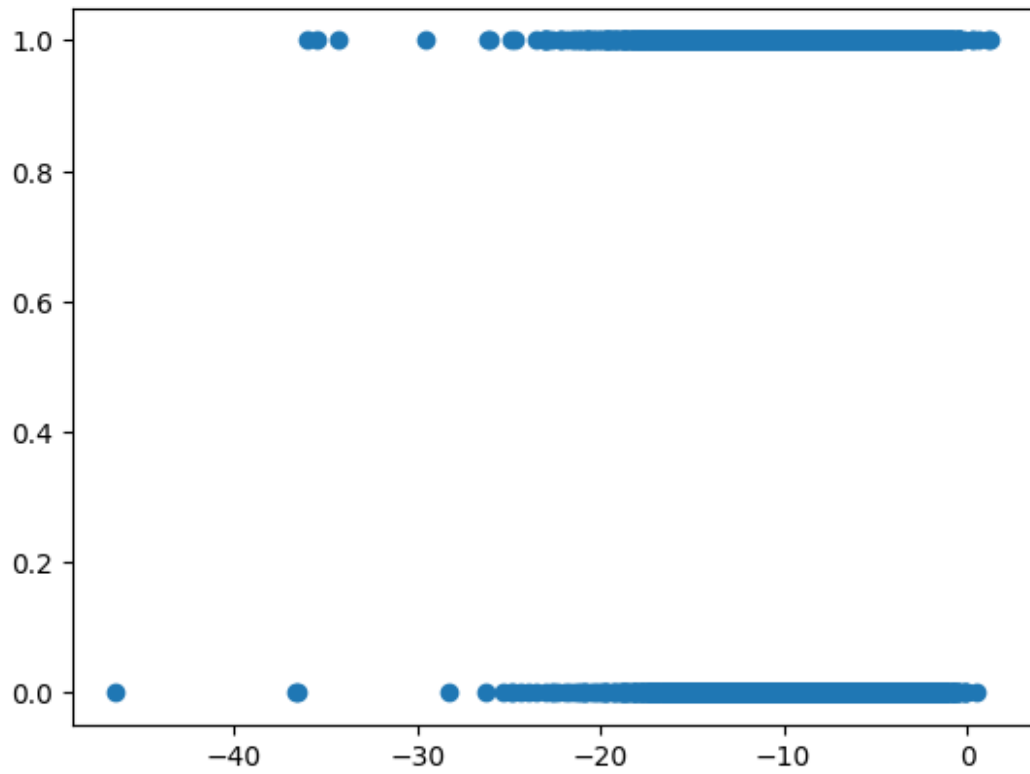
## Самые аварийные автомобильные марки



## Создание диаграммы рассеяния

Создание диаграмм рассеяния, отображаем значения переменных по оси x и по оси y. Визуализация диаграммы рассеяния помогает исследовать взаимосвязь между двумя переменными.

```
data = pd.read_csv('file.csv')  
  
x = data['loudness']  
y = data['mode']  
  
plt.scatter(x, y)  
plt.show()
```



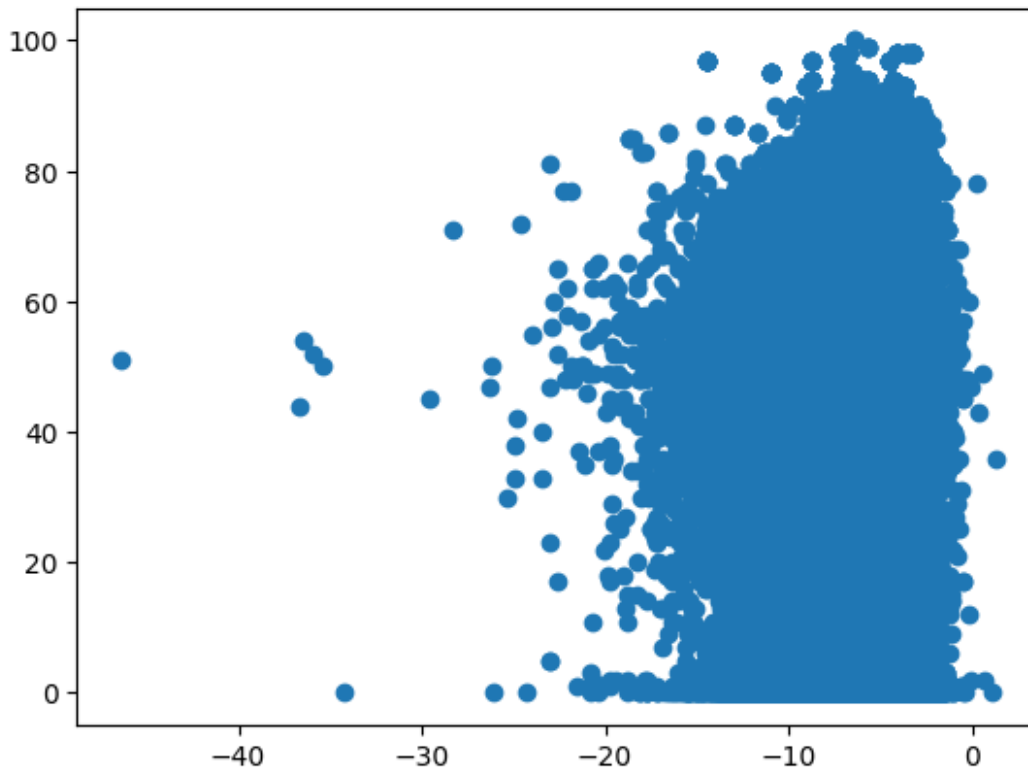
```
data = pd.read_csv('file.csv')
```

```
x = data['loudness']
```

```
y = data['track_popularity']
```

```
plt.scatter(x, y)
```

```
plt.show()
```



### Создание гистограммы

Создание гистограммы, отображаем значения переменных по оси x. Визуализация гистограммы позволяет наглядно представить распределение данных и оценить их концентрацию в различных диапазонах значений.

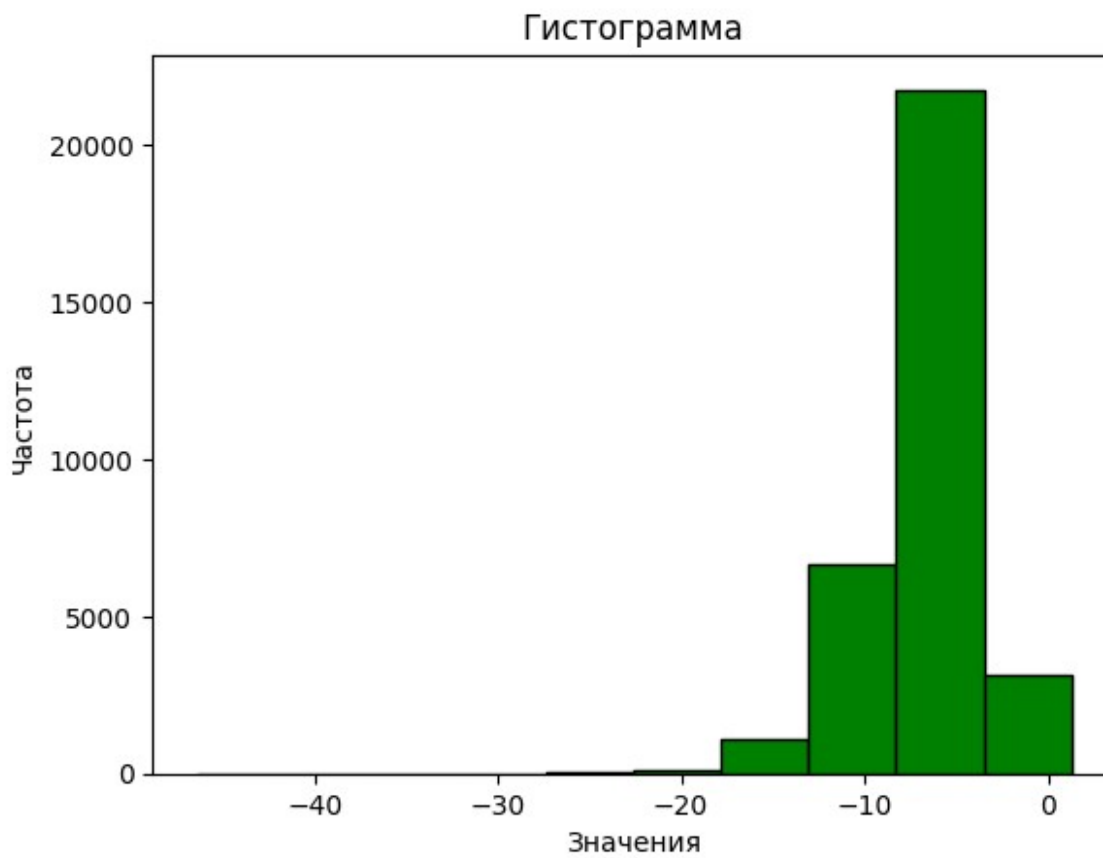
```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
data = pd.read_csv('file.csv')

x = data['loudness']

plt.hist(x, bins=10, color='green', edgecolor='black')
plt.title('Гистограмма')

plt.xlabel('Значения')
plt.ylabel('Частота')

plt.show()
```



```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd

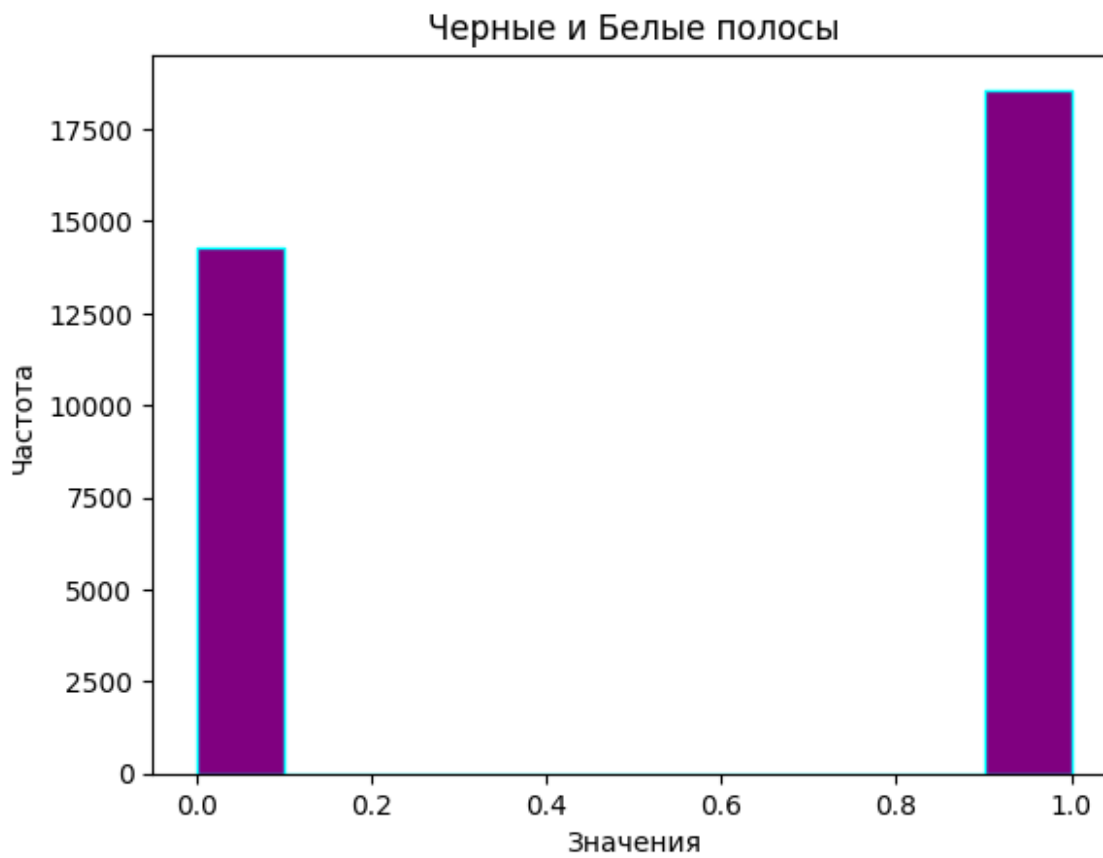
data = pd.read_csv('file.csv')

x = data['mode']

plt.hist(x, bins=10, color='purple', edgecolor='cyan' )
plt.title('Черные и Белые полосы')

plt.xlabel('Значения' )
plt.ylabel('Частота' )

plt.show()
```



```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
data = pd.read_csv('file.csv')

x = data['liveness']

plt.hist(x, bins=10, color='white', edgecolor='black' )
plt.title('Слепуха')

plt.xlabel('Значения' )
plt.ylabel('Частота' )

plt.show()
```

