



Music Through the Decades

A musical journey from the 1960-2019

By James Kocher

Overview of what you will see!



Key = The estimated overall key of the track. Integers map to pitches using standard **Pitch Class notation** . E.g. 0 = C, 1 = C#/D ♭ , 2 = D, and so on. If no key was detected, the value is -1.

Time_signature = An estimated overall time signature of a track. The time signature (meter) is a notational convention to specify how many beats are in each bar (or measure).

Mode = Mode indicates the modality (major or minor) of a track, the type of scale from which its melodic content is derived. Major is represented by 1 and minor is 0.

Acousticness = A confidence measure from 0.0 to 1.0 of whether the track is acoustic. 1.0 represents high confidence the track is acoustic.

Danceability = Danceability describes how suitable a track is for dancing based on a combination of musical elements including tempo, rhythm stability, beat strength, and overall regularity. A value of 0.0 is least danceable and 1.0 is most danceable

Tempo = The overall estimated tempo of a track in beats per minute (BPM). In musical terminology, tempo is the speed or pace of a given piece and derives directly from the average beat duration.

Overview of what you will see!



Energy = Energy is a measure from 0.0 to 1.0 and represents a perceptual measure of intensity and activity. Typically, energetic tracks feel fast, loud, and noisy. For example, death metal has high energy, while a Bach prelude scores low on the scale. Perceptual features contributing to this attribute include dynamic range, perceived loudness, timbre, onset rate, and general entropy.

Instrumentalness = Predicts whether a track contains no vocals. “Ooh” and “aah” sounds are treated as instrumental in this context. Rap or spoken word tracks are clearly “vocal”. The closer the instrumentalness value is to 1.0, the greater likelihood the track contains no vocal content. Values above 0.5 are intended to represent instrumental tracks, but confidence is higher as the value approaches 1.0.

Loudness = The overall loudness of a track in decibels (dB). Loudness values are averaged across the entire track and are useful for comparing relative loudness of tracks. Loudness is the quality of a sound that is the primary psychological correlate of physical strength (amplitude). Values typical range between -60 and 0 db.

valence = A measure from 0.0 to 1.0 describing the musical positiveness conveyed by a track. Tracks with high valence sound more positive (e.g. happy, cheerful, euphoric), while tracks with low valence sound more negative (e.g. sad, depressed, angry).

What is the Data?



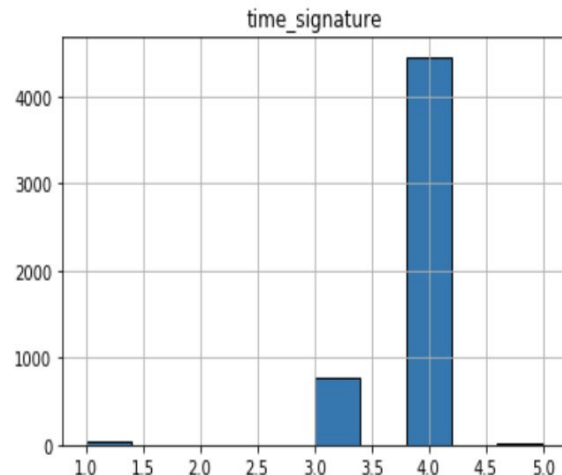
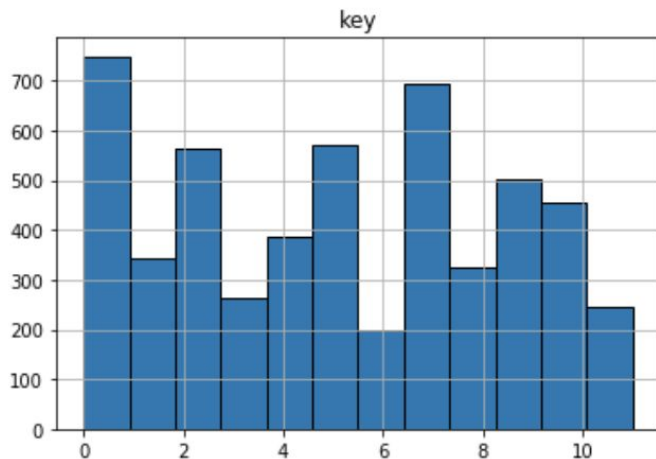
- Songs that made it on the billboard 100 during a year in the decade
- Paired with their audio features from Spotify's API
- I will be showing characteristics of popular songs across the decades!

The 1960s! - Categorical Data

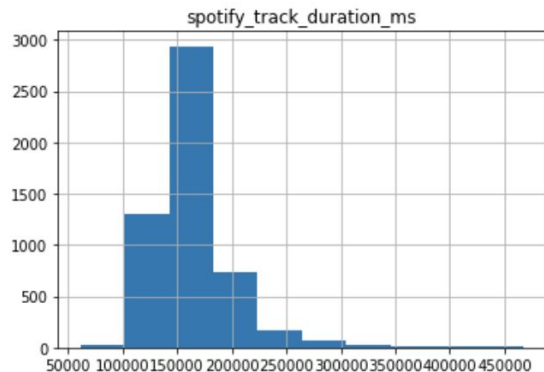
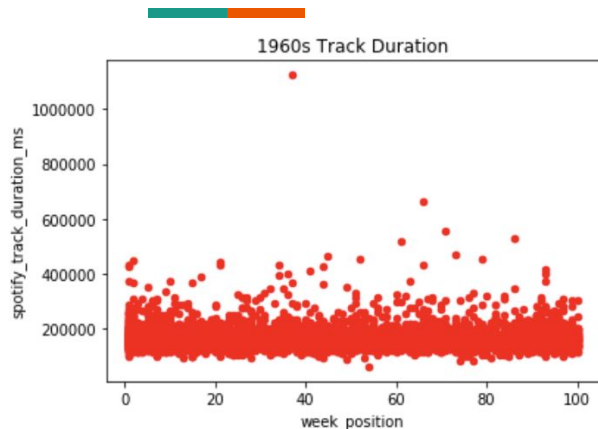
Genre:

brill building pop	2097
adult standards	1684
rock-and-roll	1315
soul	1160
bubblegum pop	1125
motown	1120
folk rock	874
classic soul	822
merseybeat	667
rhythm and blues	653
southern soul	650
lounge	629
mellow gold	609
rockabilly	571
doo-wop	508
funk	432
easy listening	430
rock	407
quiet storm	396
psychedelic rock	381
soft rock	369
british invasion	361
classic rock	357
folk	300
vocal jazz	300
classic uk pop	265
northern soul	210
disco	205
chicago soul	202
classic girl group	194

Major 4442
Minor 852

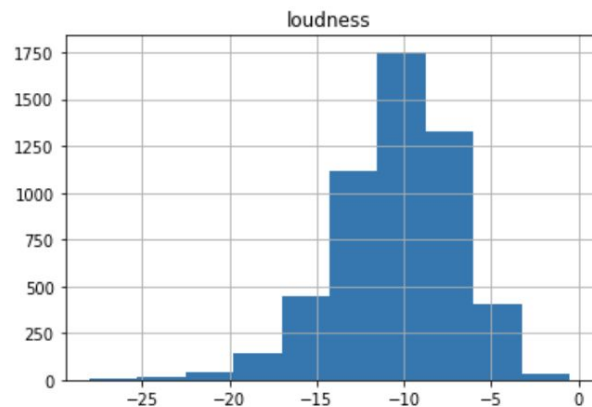


The 1960s by the numbers: Duration and Loudness



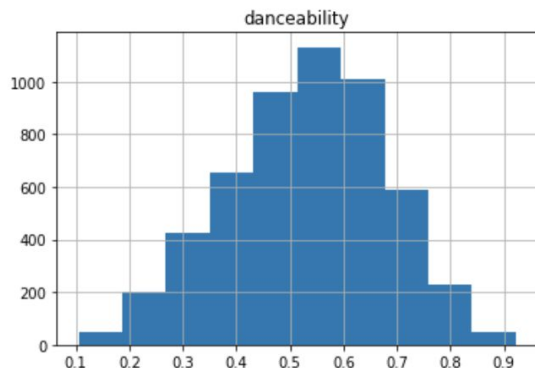
Duration:

count	5293.000000
mean	165.196054
std	40.918272
min	61.306000
25%	142.425000
50%	158.880000
75%	177.026000
max	1124.153000

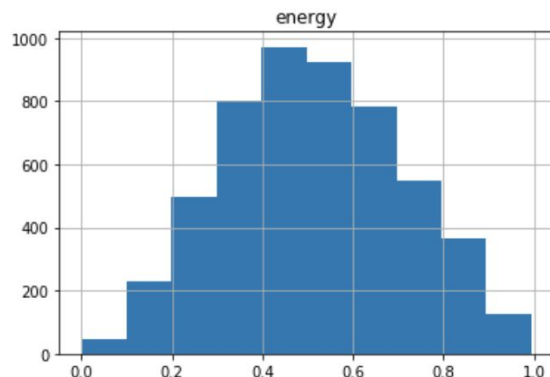


count	5294.000000
mean	-10.398376
std	3.437607
min	-28.030000
25%	-12.424000
50%	-10.066500
75%	-8.026250
max	-0.507000

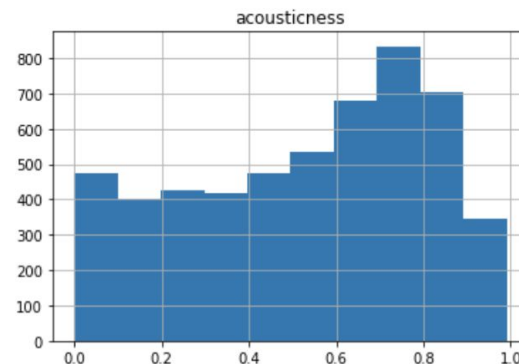
Continued: Danceability, Energy, Acoustiness



mean	0.530539
std	0.146730
min	0.105000
25%	0.431000
50%	0.538000
75%	0.637000
max	0.922000

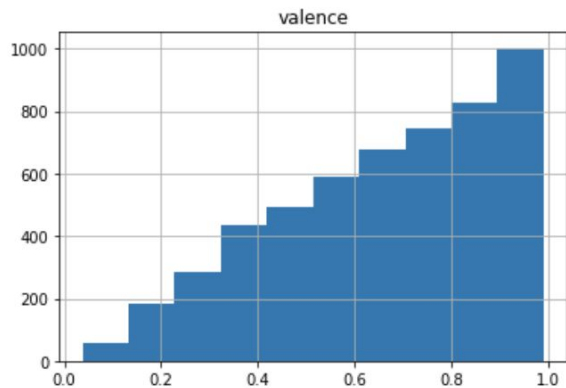


mean	0.514308
std	0.196546
min	0.000581
25%	0.368000
50%	0.508000
75%	0.660750
max	0.994000

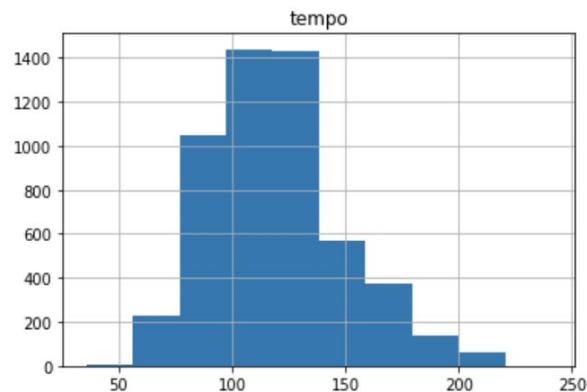


mean	0.529903
std	0.272774
min	0.000006
25%	0.303000
50%	0.582000
75%	0.760000
max	0.991000

Continued: Valence and Tempo



mean	0.661562
std	0.228617
min	0.037700
25%	0.492000
50%	0.696000
75%	0.862000
max	0.991000



mean	119.289582
std	29.153850
min	35.716000
25%	98.076750
50%	116.799000
75%	134.983000
max	241.009000

Hit Songs of the Decades Recap

1960s:

Genre: Brill Building Pop, Adult Standards, Rock and Roll

Key : C

Mode: Major (84%)

Time Signature: 4:4

Duration: 2:30 - 3:00

Loudness: 10 decibels

Danceability: .45 - 60

Energy: .40 - .60

Accousticness: .55 - 65

Valence: 65+

Tempo: 100 - 120 BPM



Hit Songs of the Decades Recap



1960s:

Genre: Brill
Building Pop, Adult
Standards, Rock
and Roll

Key : C, D, E#/F ♭ ,
F#/G ♭

Mode: Major (84%)

Time Signature: 4:4

Duration: 2:30 -
3:00

Loudness: 10
decibels

Danceability:

Energy:

Accousticness:

Valence:

Tempo:

1970s:

Genre: Brill
Building Pop, Adult
Standards, Rock
and Roll

Key : C, D, E#/F ♭ ,
F#/G ♭

Mode: Major (84%)

Time Signature: 4:4

Duration: 2:30 -
3:00

Loudness: 10
decibels

Danceability:

Energy:

Accousticness:

Valence:

Tempo:

1980s:

Genre: Brill
Building Pop, Adult
Standards, Rock
and Roll

Key : C, D, E#/F ♭ ,
F#/G ♭

Mode: Major (84%)

Time Signature: 4:4

Duration: 2:30 -
3:00

Loudness: 10
decibels

Danceability:

Energy:

Accousticness:

Valence:

Tempo:

1990s:

Genre: Brill
Building Pop, Adult
Standards, Rock
and Roll

Key : C, D, E#/F ♭ ,
F#/G ♭

Mode: Major (84%)

Time Signature: 4:4

Duration: 2:30 -
3:00

Loudness: 10
decibels

Danceability:

Energy:

Accousticness:

Valence:

Tempo:

2000s:

Genre: Brill
Building Pop,
Adult Standards,
Rock and Roll

Key : C, D, E#/F ♭ ,
F#/G ♭

Mode: Major
(84%)

Time Signature:
4:4

Duration: 2:30 -
3:00

Loudness: 10
decibels

Danceability:

Energy:

Accousticness:

Valence:

Tempo:

2010s:

Genre: Brill
Building Pop,
Adult Standards,
Rock and Roll

Key : C, D, E#/F ♭ ,
F#/G ♭

Mode: Major
(84%)

Time Signature:
4:4

Duration: 2:30 -
3:00

Loudness: 10
decibels

Danceability:

Energy:

Accousticness:

Valence:

Tempo: