

Spotify Billboard Classifier

Course Project: DATA 1030 - Hands On Machine Learning

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Introduction to Database

acousticness		album_id		artist_id		billboard	
0	0.00784	2Auw0pTT6EcQdvHNimhLQI		04gDigrS5kc9YWfZHwBETP		1.0	
1	0.05910	2Auw0pTT6EcQdvHNimhLQI		04gDigrS5kc9YWfZHwBETP		1.0	
2	0.28400	2Auw0pTT6EcQdvHNimhLQI		04gDigrS5kc9YWfZHwBETP		1.0	
danceability		date	duration_ms	energy	id		
0	0.532	2015-05-15	238200.0	0.599	1m39XApXHXb2UkGItyyIU0		
1	0.748	2015-05-15	235493.0	0.788	2iuZJX9X9P0GKaE93xcPjk		
2	0.501	2015-05-15	203453.0	0.704	13YQutqrAhT5iX9H0ctlu5		
instrumentalness	key	length	liveness	loudness	mode	speechiness	
0	0.0	6.0	12.0	0.1400	-6.543	1.0	0.0333
1	0.0	1.0	12.0	0.0863	-7.055	1.0	0.0334
2	0.0	3.0	12.0	0.1550	-5.640	1.0	0.0326
tempo	time_signature	track_length		valence			
0	130.019	4.0		225984.25 0.113			
1	120.076	4.0		225984.25 0.884			
2	97.039	4.0		225984.25 0.270			

Figure: Sample data with Features



Correlation between Features

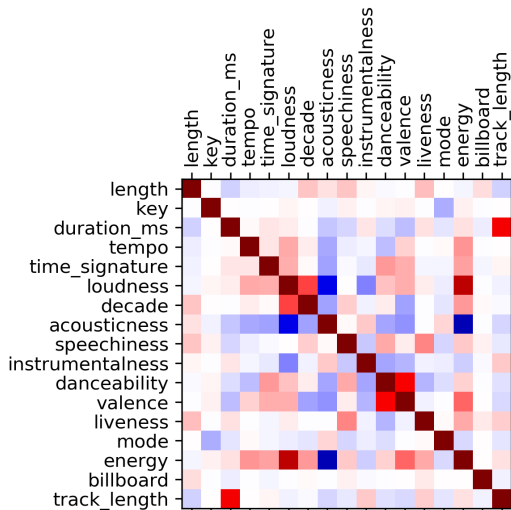


Figure: Correlation Plot between features



Data Distribution

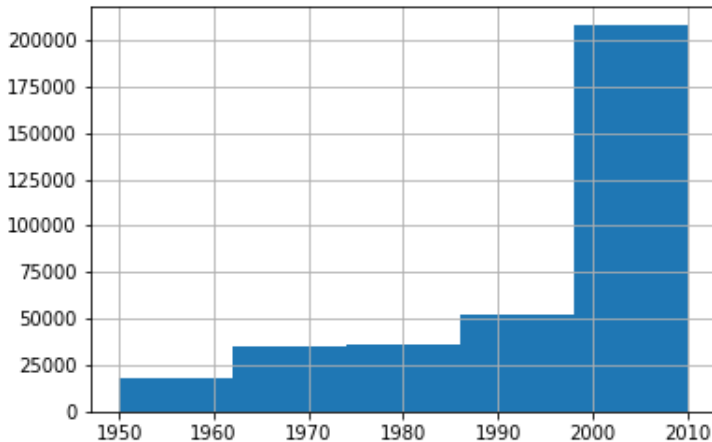


Figure: Song distribution over years



Acoustic Features along the decades I

Acousticness

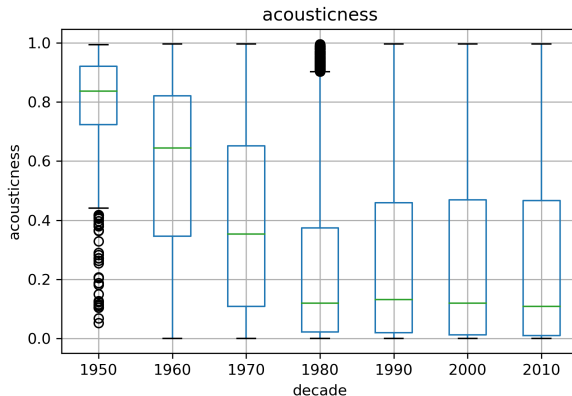


Figure: Acousticness over time



Acoustic Features along the decades II

Danceability

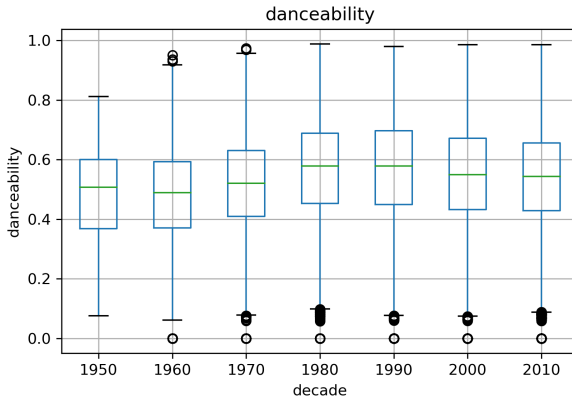


Figure: Danceability over time



Acoustic Features along the decades III

Speechiness

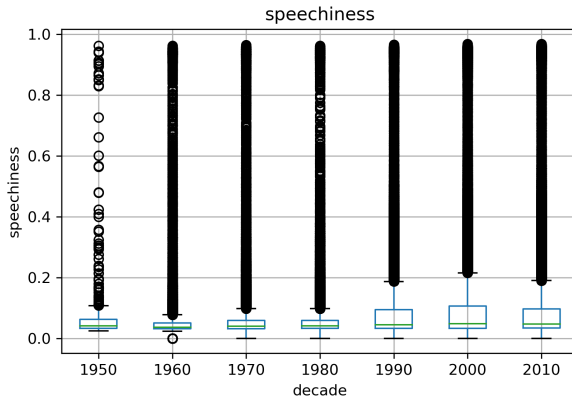


Figure: Speechiness over time



Acoustic Features along the decades IV

Key

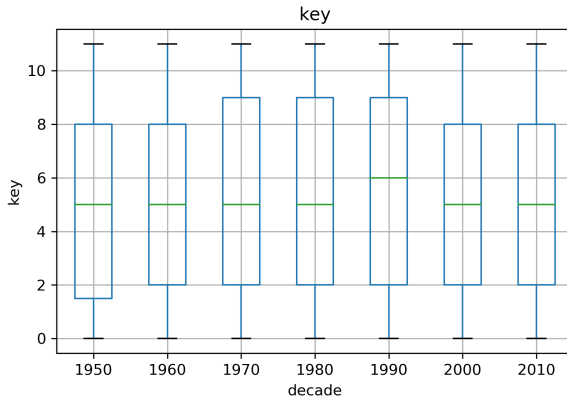


Figure: Key over time



Acoustic Features along the decades V

Loudness

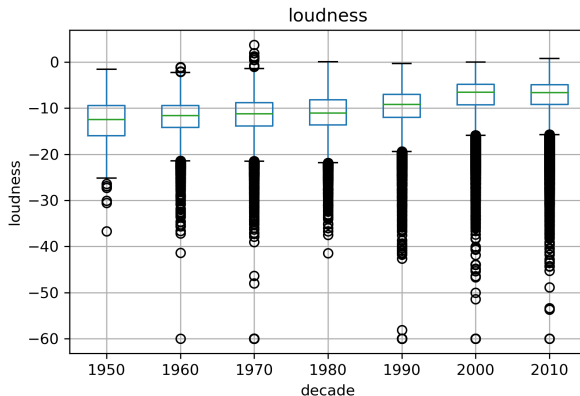


Figure: Loudness over time



Acoustic Features along the decades VI

Mode

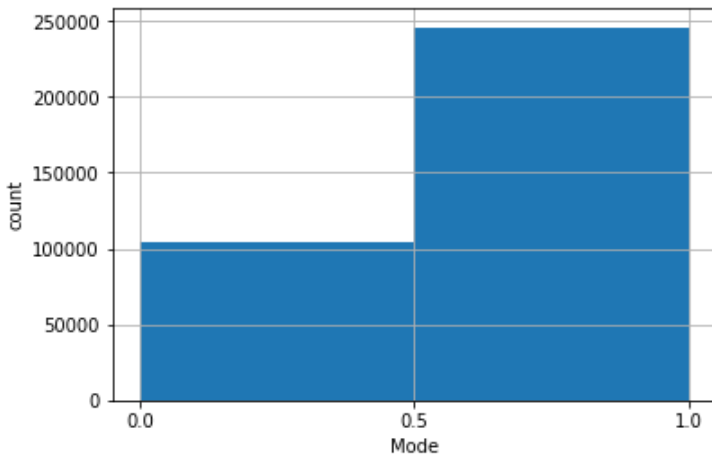


Figure: Mode Distribution



Acoustic Features along the decades VII

Liveness

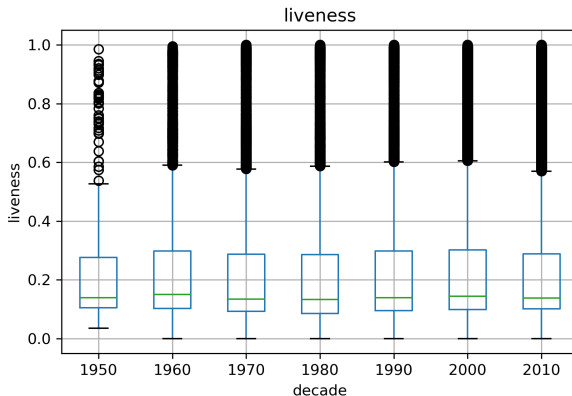


Figure: Liveness over time



Acoustic Features along the decades VIII

Valence

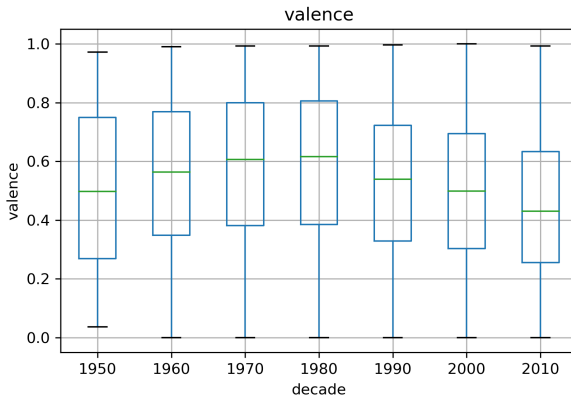


Figure: Valence over time



Acoustic Features along the decades IX

Instrumentalness

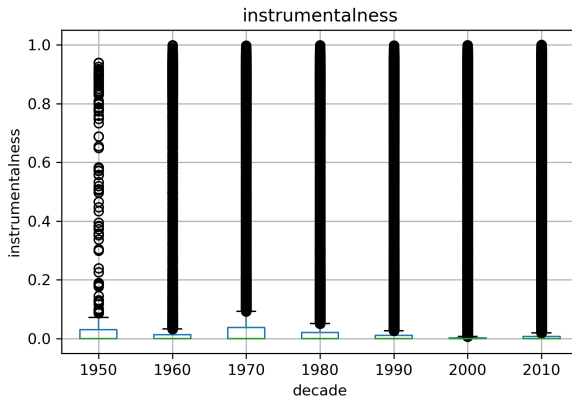


Figure: Instrumentalness over time



Acoustic Features along the decades X

Tempo

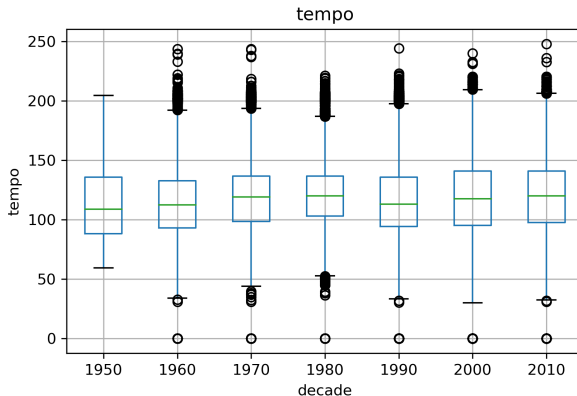


Figure: Tempo over time



Acoustic Features along the decades XI

Energy

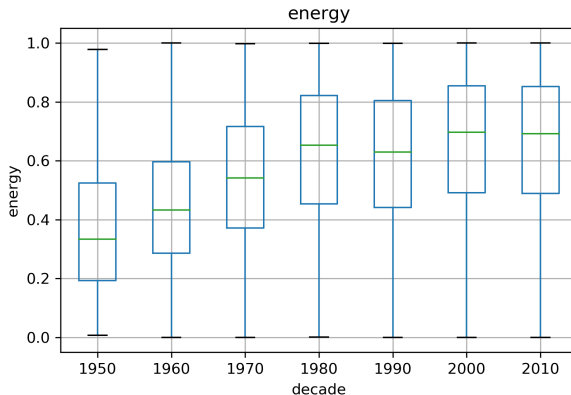


Figure: Energy over time



Acoustic Features along the decades XII

Time Signature

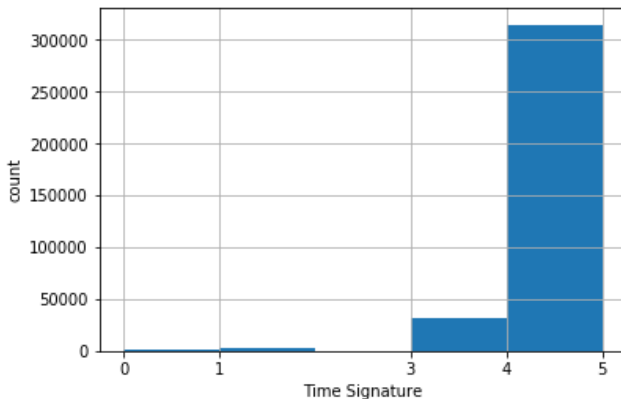


Figure: Time signature dsitribution



Tracks distribution



Figure: Tracks distribution over ages



Feature to Feature behaviour I

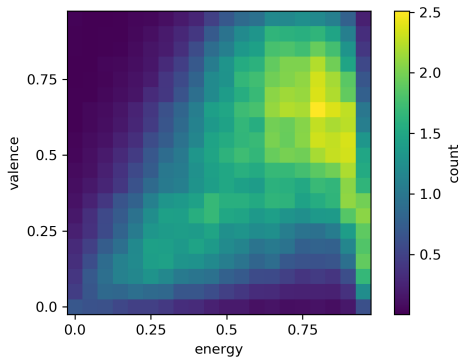


Figure: Energy vs Valence

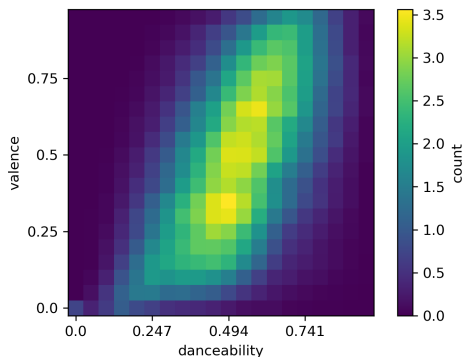


Figure: Danceability vs Valence



Feature to Feature behaviour II

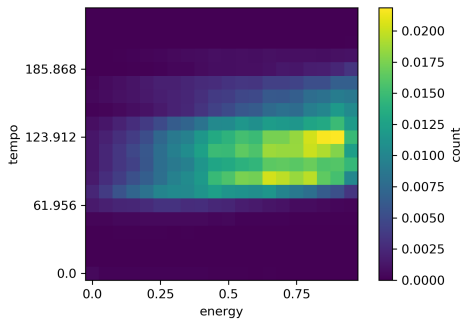


Figure: Energy vs Tempo

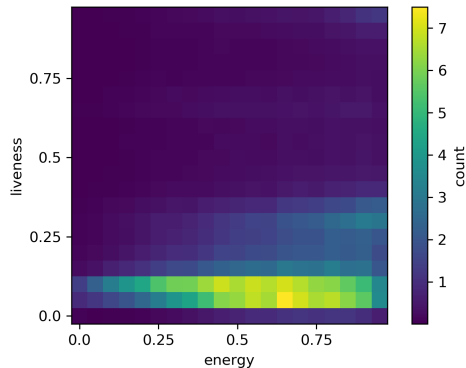


Figure: Energy vs Liveness



Feature to Feature behaviour III

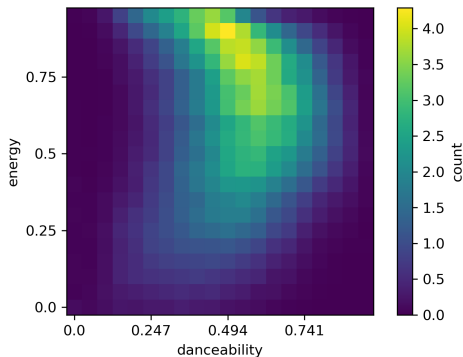


Figure: Danceability vs. Energy

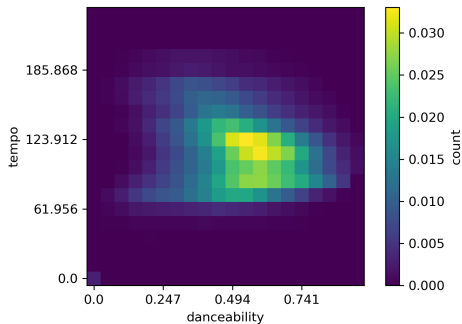


Figure: Danceability vs. Tempo



Thank You. Question?

