

Statistics and Results after KNN Classify

Dataset	Patterns	Features		Labels	Cardinality	Density	Domain
		Size	Type				
DEAM	1802	389	Numeric	141	1.000	0.007	Emotion
GTZAN	1000	389	Numeric	10	1.000	0.100	Genre
HOMBURG	1886	389	Numeric	9	1.000	0.111	Genre
FMA_SMALL	7996	389	Numeric	8	1.000	0.125	Genre
IRMAS	6700	384	Numeric	5	1.000	0.200	Instrument
MER500	493	389	Numeric	5	1.000	0.200	Emotion
emoMusic	1000	389	Numeric	8	1.000	0.125	Emotion
Soundtracks	470	389	Numeric	9	1.000	0.111	Emotion
emotifymusic	400	389	Numeric	4	1.000	0.250	Genre
ballroom	698	389	Numeric	8	1.000	0.125	Genre
SeyerlehnerUnique	3115	389	Numeric	10	1.000	0.100	Genre
MIREX-like_mood	903	385	Numeric	28	1.000	0.036	Mood
Medley-solos	20303	384	Numeric	8	1.000	0.125	Instrument
ISMIR04	729	391	Numeric	6	1.000	0.167	Genre
good-sounds	2747	378	Numeric	5	1.000	0.200	Instrument
MICM	1137	888	Numeric	7	1.000	0.143	Modal System
Tropical Genres	1500	888	Numeric	5	1.000	0.200	Genre
PCMIR	2410	886	Numeric	6	1.000	0.167	Instrument
extendedBallroom	4180	389	Numeric	13	1.000	0.077	Genre
giantstepstempo	664	389	Numeric	23	1.000	0.043	Genre&Tempo
giantstepskey	604	389	Numeric	24	1.000	0.042	Key
GMD	1042	889	Numeric	18	1.000	0.056	Genre
FMA_MEDIUM	24984	389	Numeric	16	1.000	0.063	Genre
MagnaTagATune	25860	888	Numeric	17	0.194	0.011	Emotion
MagnaTagATune	25860	888	Numeric	58	0.446	0.008	Genre
MagnaTagATune	25860	888	Numeric	45	0.918	0.020	Instrument
MagnaTagATune	25860	888	Numeric	9	0.343	0.038	Tempo
CAL500	498	1277	Numeric	27	7.351	0.006	Emotion
CAL500	482	888	Numeric	14	3.299	0.236	Instrument&Vocal
CAL500	449	888	Numeric	12	2.158	0.180	Genre

Experimental settings

Dataset	Avg. of the results
DEAM	0.9849 ± 0.0016
GTZAN	0.8624 ± 0.0100
HOMBURG	0.6670 ± 0.0163
FMA_SMALL	0.7810 ± 0.0054
IRMAS	0.7983 ± 0.0007
MER500	0.6770 ± 0.0202
emoMusic	0.8427 ± 0.0090
Soundtracks	0.8061 ± 0.0236
emotifymusic	0.6192 ± 0.0220
ballroom	0.7625 ± 0.0221
SeyerlehnerUnique	0.8906 ± 0.0029
MIREX-like_mood	0.9612 ± 0.0041
Medley-solos	0.6620 ± 0.0059
ISMIR04	0.7617 ± 0.0149
good-sounds	0.6978 ± 0.0071
MICM	0.8573 ± 0.0002
Tropical Genres	0.6793 ± 0.0119
PCMIR	0.7437 ± 0.0085
extendedBallroom	0.8405 ± 0.0077
giantstepstempo	0.9392 ± 0.0052
giantstepskey	0.9427 ± 0.0108
GMD	0.9008 ± 0.0117
FMA_MEDIUM	0.9345 ± 0.0006
MagnaTagATune	-
MagnaTagATune	-
MagnaTagATune	-
MagnaTagATune	-
CAL500	-
CAL500	-
CAL500	-

- 8:2 hold-out cross validation
- KNN classifier (k=3)
- “NaN” values were treated by KNN Imputer.
- Numeric type of datasets were dicretized by using laim discretization algorithm.