

Question 1: Downloading Sounds

Chosen sound classes:

- Violin
- Guitar
- Bassoon
- Trumpet
- Clarinet
- Cello
- Daluo
- Snare Drum
- Flute
- Mridangam

I chose these instruments, trying to get a good balance between timbre differences and number of instruments that belonged to same instrument family. Doing it this way, I could investigate the data selection and the k-means algorithm efficiency. The query texts were the same as the instrument names for all classes, except for the snare drum, which “snare” only was used. For the violin, guitar, bassoon, trumpet, clarinet, cello and flute the “single-note” tag was used; for the snare drum, I used a “1-shot” tag; and for the dale and mridangam no tags were used. The duration of the samples queried were also fine tuned to get the best data set representation.

Violin:

355777	https://freesound.org/people/MTG/sounds/355777/
355786	https://freesound.org/people/MTG/sounds/355786/
355787	https://freesound.org/people/MTG/sounds/355787/
355791	https://freesound.org/people/MTG/sounds/355791/
355796	https://freesound.org/people/MTG/sounds/355796/
355800	https://freesound.org/people/MTG/sounds/355800/
355807	https://freesound.org/people/MTG/sounds/355807/
355808	https://freesound.org/people/MTG/sounds/355808/
355812	https://freesound.org/people/MTG/sounds/355812/
355813	https://freesound.org/people/MTG/sounds/355813/
355814	https://freesound.org/people/MTG/sounds/355814/
355820	https://freesound.org/people/MTG/sounds/355820/
355821	https://freesound.org/people/MTG/sounds/355821/
355822	https://freesound.org/people/MTG/sounds/355822/
355823	https://freesound.org/people/MTG/sounds/355823/
355824	https://freesound.org/people/MTG/sounds/355824/
355825	https://freesound.org/people/MTG/sounds/355825/
355826	https://freesound.org/people/MTG/sounds/355826/
355827	https://freesound.org/people/MTG/sounds/355827/
355828	https://freesound.org/people/MTG/sounds/355828/

Guitar:

91199	https://freesound.org/people/byzelectro/sounds/91199/
110455	https://freesound.org/people/byzelectro/sounds/110455/
399467	https://freesound.org/people/Skamos66/sounds/399467/
399468	https://freesound.org/people/Skamos66/sounds/399468/
399469	https://freesound.org/people/Skamos66/sounds/399469/
399470	https://freesound.org/people/Skamos66/sounds/399470/
399471	https://freesound.org/people/Skamos66/sounds/399471/
399472	https://freesound.org/people/Skamos66/sounds/399472/
399473	https://freesound.org/people/Skamos66/sounds/399473/
399474	https://freesound.org/people/Skamos66/sounds/399474/
399475	https://freesound.org/people/Skamos66/sounds/399475/
399478	https://freesound.org/people/Skamos66/sounds/399478/
399479	https://freesound.org/people/Skamos66/sounds/399479/
399481	https://freesound.org/people/Skamos66/sounds/399481/

399483	https://freesound.org/people/Skamos66/sounds/399483/
399484	https://freesound.org/people/Skamos66/sounds/399484/
399486	https://freesound.org/people/Skamos66/sounds/399486/
399490	https://freesound.org/people/Skamos66/sounds/399490/
399491	https://freesound.org/people/Skamos66/sounds/399491/
399492	https://freesound.org/people/Skamos66/sounds/399492/

Bassoon:

372618	https://freesound.org/people/Samulis/sounds/372618/
372619	https://freesound.org/people/Samulis/sounds/372619/
372620	https://freesound.org/people/Samulis/sounds/372620/
372621	https://freesound.org/people/Samulis/sounds/372621/
372622	https://freesound.org/people/Samulis/sounds/372622/
372623	https://freesound.org/people/Samulis/sounds/372623/
372624	https://freesound.org/people/Samulis/sounds/372624/
372628	https://freesound.org/people/Samulis/sounds/372628/
372629	https://freesound.org/people/Samulis/sounds/372629/
372630	https://freesound.org/people/Samulis/sounds/372630/
372631	https://freesound.org/people/Samulis/sounds/372631/
372633	https://freesound.org/people/Samulis/sounds/372633/
372634	https://freesound.org/people/Samulis/sounds/372634/
372635	https://freesound.org/people/Samulis/sounds/372635/
372636	https://freesound.org/people/Samulis/sounds/372636/
372637	https://freesound.org/people/Samulis/sounds/372637/
372641	https://freesound.org/people/Samulis/sounds/372641/
372643	https://freesound.org/people/Samulis/sounds/372643/
372644	https://freesound.org/people/Samulis/sounds/372644/
372645	https://freesound.org/people/Samulis/sounds/372645/

Trumpet:

357328	https://freesound.org/people/MTG/sounds/357328/
357336	https://freesound.org/people/MTG/sounds/357336/
357344	https://freesound.org/people/MTG/sounds/357344/
357360	https://freesound.org/people/MTG/sounds/357360/
357361	https://freesound.org/people/MTG/sounds/357361/
357363	https://freesound.org/people/MTG/sounds/357363/
357364	https://freesound.org/people/MTG/sounds/357364/
357365	https://freesound.org/people/MTG/sounds/357365/
357370	https://freesound.org/people/MTG/sounds/357370/
357380	https://freesound.org/people/MTG/sounds/357380/
357381	https://freesound.org/people/MTG/sounds/357381/
357383	https://freesound.org/people/MTG/sounds/357383/
357384	https://freesound.org/people/MTG/sounds/357384/
357385	https://freesound.org/people/MTG/sounds/357385/
357387	https://freesound.org/people/MTG/sounds/357387/
357388	https://freesound.org/people/MTG/sounds/357388/
357389	https://freesound.org/people/MTG/sounds/357389/
357390	https://freesound.org/people/MTG/sounds/357390/
357391	https://freesound.org/people/MTG/sounds/357391/
357432	https://freesound.org/people/MTG/sounds/357432/

Clarinet:

249099	https://freesound.org/people/MTG/sounds/249099/
249137	https://freesound.org/people/MTG/sounds/249137/
249138	https://freesound.org/people/MTG/sounds/249138/
249144	https://freesound.org/people/MTG/sounds/249144/
249145	https://freesound.org/people/MTG/sounds/249145/
248393	https://freesound.org/people/MTG/sounds/248393/
248395	https://freesound.org/people/MTG/sounds/248395/
248396	https://freesound.org/people/MTG/sounds/248396/

248416	https://freesound.org/people/MTG/sounds/248416/
248421	https://freesound.org/people/MTG/sounds/248421/
248428	https://freesound.org/people/MTG/sounds/248428/
248432	https://freesound.org/people/MTG/sounds/248432/
248434	https://freesound.org/people/MTG/sounds/248434/
248435	https://freesound.org/people/MTG/sounds/248435/
248455	https://freesound.org/people/MTG/sounds/248455/
248466	https://freesound.org/people/MTG/sounds/248466/
248474	https://freesound.org/people/MTG/sounds/248474/
248475	https://freesound.org/people/MTG/sounds/248475/
248476	https://freesound.org/people/MTG/sounds/248476/
248479	https://freesound.org/people/MTG/sounds/248479/

Cello:

357918	https://freesound.org/people/MTG/sounds/357918/
357926	https://freesound.org/people/MTG/sounds/357926/
357931	https://freesound.org/people/MTG/sounds/357931/
357934	https://freesound.org/people/MTG/sounds/357934/
357936	https://freesound.org/people/MTG/sounds/357936/
357937	https://freesound.org/people/MTG/sounds/357937/
357938	https://freesound.org/people/MTG/sounds/357938/
357941	https://freesound.org/people/MTG/sounds/357941/
357948	https://freesound.org/people/MTG/sounds/357948/
357952	https://freesound.org/people/MTG/sounds/357952/
357954	https://freesound.org/people/MTG/sounds/357954/
357957	https://freesound.org/people/MTG/sounds/357957/
357958	https://freesound.org/people/MTG/sounds/357958/
357959	https://freesound.org/people/MTG/sounds/357959/
357960	https://freesound.org/people/MTG/sounds/357960/
357961	https://freesound.org/people/MTG/sounds/357961/
357963	https://freesound.org/people/MTG/sounds/357963/
357964	https://freesound.org/people/MTG/sounds/357964/
357965	https://freesound.org/people/MTG/sounds/357965/
357966	https://freesound.org/people/MTG/sounds/357966/

Daluo:

222191	https://freesound.org/people/ajaysm/sounds/222191/
222206	https://freesound.org/people/ajaysm/sounds/222206/
222212	https://freesound.org/people/ajaysm/sounds/222212/
222214	https://freesound.org/people/ajaysm/sounds/222214/
222215	https://freesound.org/people/ajaysm/sounds/222215/
222227	https://freesound.org/people/ajaysm/sounds/222227/
222234	https://freesound.org/people/ajaysm/sounds/222234/
222235	https://freesound.org/people/ajaysm/sounds/222235/
222236	https://freesound.org/people/ajaysm/sounds/222236/
206023	https://freesound.org/people/ajaysm/sounds/206023/
222190	https://freesound.org/people/ajaysm/sounds/222190/
222192	https://freesound.org/people/ajaysm/sounds/222192/
222193	https://freesound.org/people/ajaysm/sounds/222193/
222195	https://freesound.org/people/ajaysm/sounds/222195/
222196	https://freesound.org/people/ajaysm/sounds/222196/
222197	https://freesound.org/people/ajaysm/sounds/222197/
222198	https://freesound.org/people/ajaysm/sounds/222198/
222199	https://freesound.org/people/ajaysm/sounds/222199/
222200	https://freesound.org/people/ajaysm/sounds/222200/
222201	https://freesound.org/people/ajaysm/sounds/222201/

Snare Drum:

329902	https://freesound.org/people/alexthegr81/sounds/329902/
454626	https://freesound.org/people/Ledovsky/sounds/454626/

329903	https://freesound.org/people/alexthegr81/sounds/329903/
317274	https://freesound.org/people/Dpoggioli/sounds/317274/
524452	https://freesound.org/people/EntropicVoxels/sounds/524452/
209513	https://freesound.org/people/it_was_the_sun/sounds/209513/
252736	https://freesound.org/people/crispydinner/sounds/252736/
252737	https://freesound.org/people/crispydinner/sounds/252737/
252738	https://freesound.org/people/crispydinner/sounds/252738/
252739	https://freesound.org/people/crispydinner/sounds/252739/
252741	https://freesound.org/people/crispydinner/sounds/252741/
252742	https://freesound.org/people/crispydinner/sounds/252742/
252743	https://freesound.org/people/crispydinner/sounds/252743/
252744	https://freesound.org/people/crispydinner/sounds/252744/
252745	https://freesound.org/people/crispydinner/sounds/252745/
252746	https://freesound.org/people/crispydinner/sounds/252746/
252747	https://freesound.org/people/crispydinner/sounds/252747/
252749	https://freesound.org/people/crispydinner/sounds/252749/
252750	https://freesound.org/people/crispydinner/sounds/252750/
252752	https://freesound.org/people/crispydinner/sounds/252752/

Flute:

427567	https://freesound.org/people/Maria_Mannone/sounds/427567/
427566	https://freesound.org/people/Maria_Mannone/sounds/427566/
246979	https://freesound.org/people/MTG/sounds/246979/
246992	https://freesound.org/people/MTG/sounds/246992/
247000	https://freesound.org/people/MTG/sounds/247000/
247001	https://freesound.org/people/MTG/sounds/247001/
247004	https://freesound.org/people/MTG/sounds/247004/
247002	https://freesound.org/people/MTG/sounds/247002/
247003	https://freesound.org/people/MTG/sounds/247003/
247005	https://freesound.org/people/MTG/sounds/247005/
247006	https://freesound.org/people/MTG/sounds/247006/
247007	https://freesound.org/people/MTG/sounds/247007/
247008	https://freesound.org/people/MTG/sounds/247008/
247009	https://freesound.org/people/MTG/sounds/247009/
247010	https://freesound.org/people/MTG/sounds/247010/
247011	https://freesound.org/people/MTG/sounds/247011/
247020	https://freesound.org/people/MTG/sounds/247020/
247021	https://freesound.org/people/MTG/sounds/247021/
247029	https://freesound.org/people/MTG/sounds/247029/
247031	https://freesound.org/people/MTG/sounds/247031/

Mridangam:

224031	https://freesound.org/people/akshaylaya/sounds/224031/
224032	https://freesound.org/people/akshaylaya/sounds/224032/
224033	https://freesound.org/people/akshaylaya/sounds/224033/
224034	https://freesound.org/people/akshaylaya/sounds/224034/
224035	https://freesound.org/people/akshaylaya/sounds/224035/
224036	https://freesound.org/people/akshaylaya/sounds/224036/
224037	https://freesound.org/people/akshaylaya/sounds/224037/
224038	https://freesound.org/people/akshaylaya/sounds/224038/
224039	https://freesound.org/people/akshaylaya/sounds/224039/
224040	https://freesound.org/people/akshaylaya/sounds/224040/
224041	https://freesound.org/people/akshaylaya/sounds/224041/
224042	https://freesound.org/people/akshaylaya/sounds/224042/
224043	https://freesound.org/people/akshaylaya/sounds/224043/
224044	https://freesound.org/people/akshaylaya/sounds/224044/
224045	https://freesound.org/people/akshaylaya/sounds/224045/
224046	https://freesound.org/people/akshaylaya/sounds/224046/
224047	https://freesound.org/people/akshaylaya/sounds/224047/
224048	https://freesound.org/people/akshaylaya/sounds/224048/

224049	https://freesound.org/people/akshaylaya/sounds/224049/
224051	https://freesound.org/people/akshaylaya/sounds/224051/

Question 2: Obtaining a baseline clustering performance

Set of descriptors:

- 3: 'sfx.logattacktime.mean'
- 1: 'lowlevel.dissonance.mean'

Accuracy after 10 loops: 53.55