

Team Rattata Final Presentation



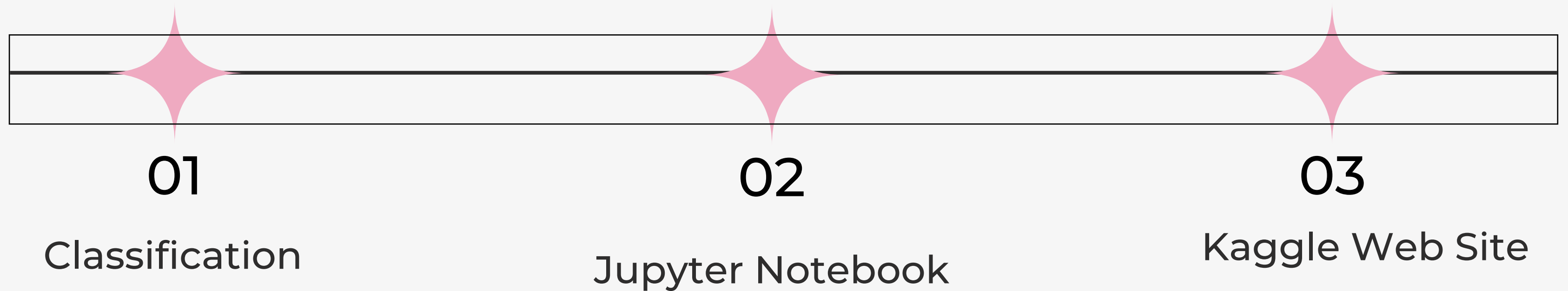
BLACKPINK

Why BLACKPINK?

BLACKPINK is one of the biggest global girl groups of this generation. They have fans from all over the world and are the most influential girl group in K-pop. Ever since their debut in 2016, the addition of BLACKPINK to K-pop has been a welcomed one, as they have quickly captured the hearts and minds worldwide.

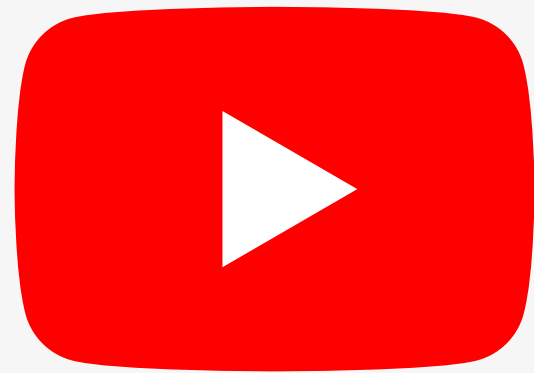


Methodology



BLACKPINK

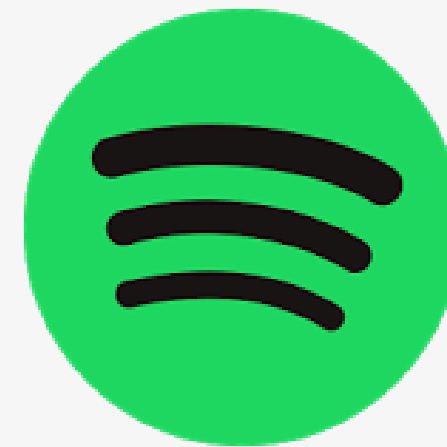
API's



Youtube Data API

Details of Youtube
channels of kpop groups
and BLACKPINK

Details of youtube videos
of kpop groups and
BLACKPINK

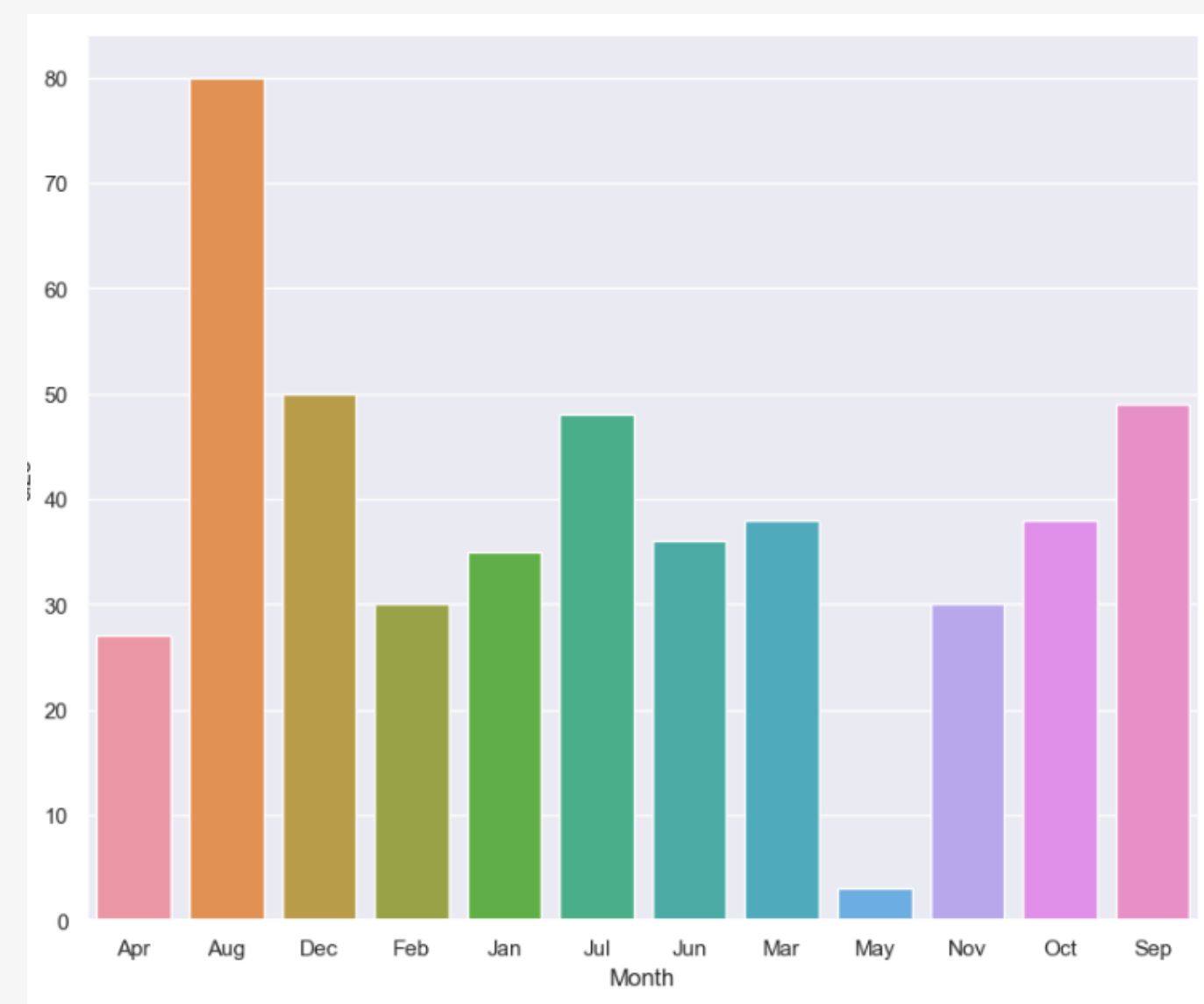
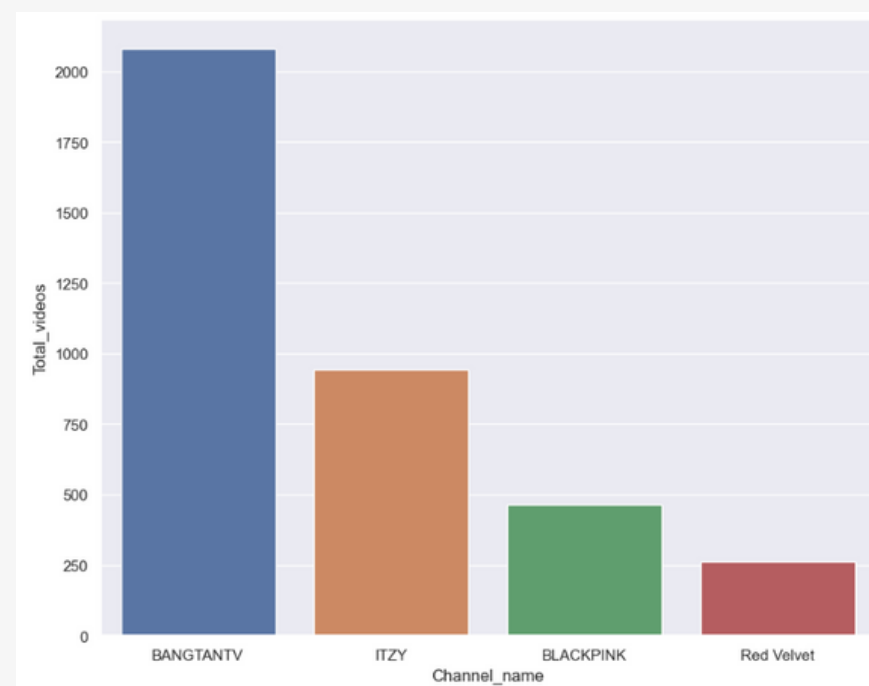
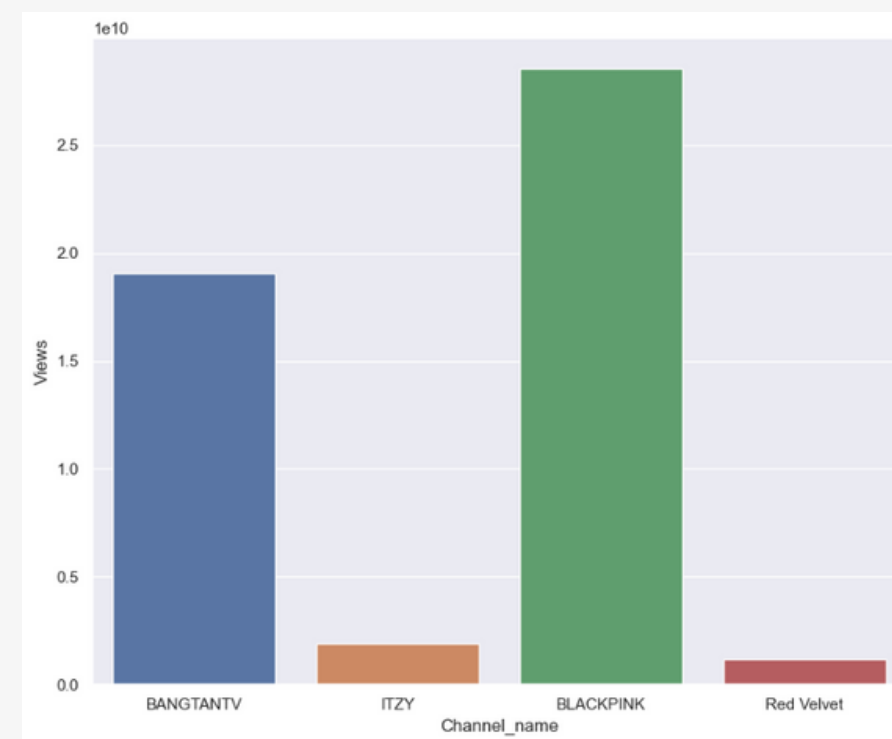
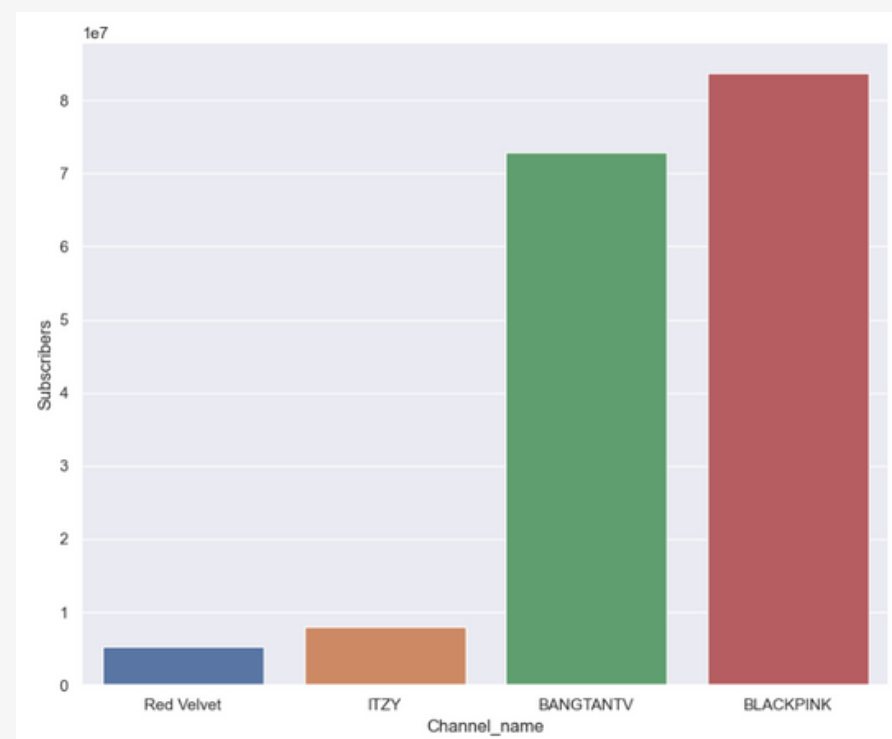


Spotify Web API

Audio features Kpop
groups and BLACKPINK

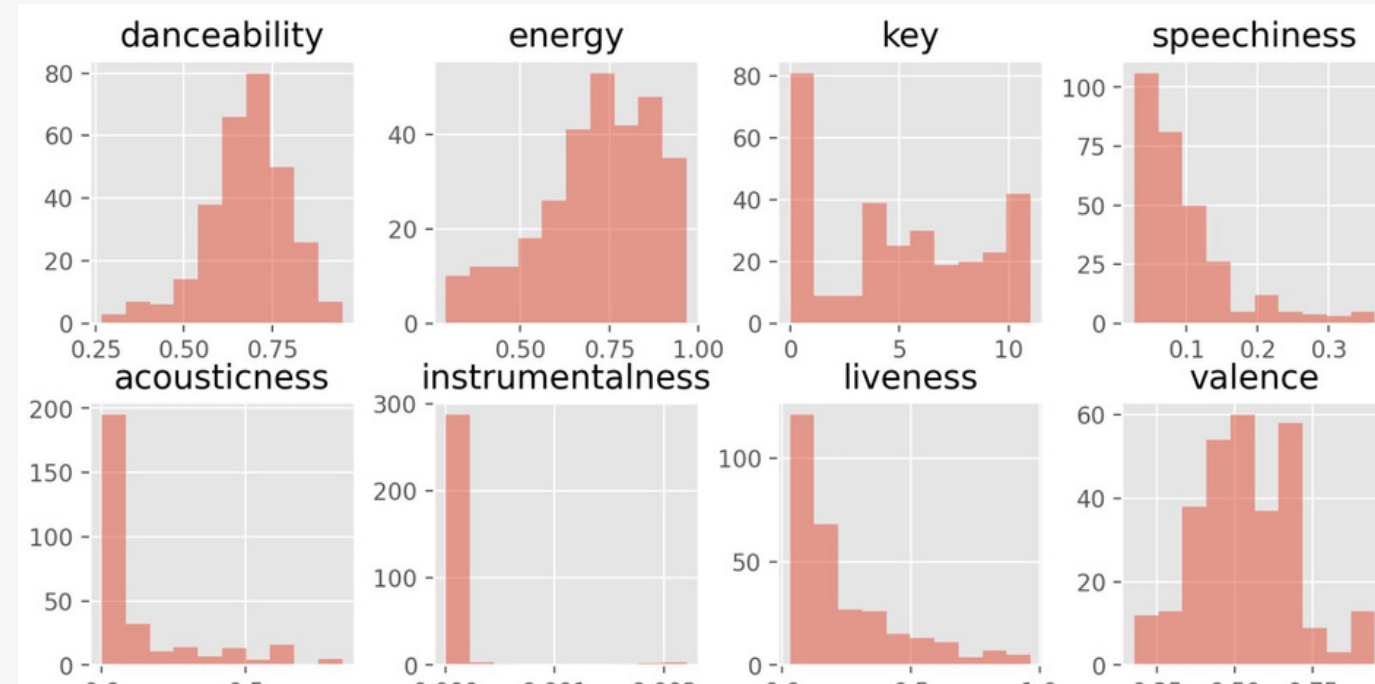
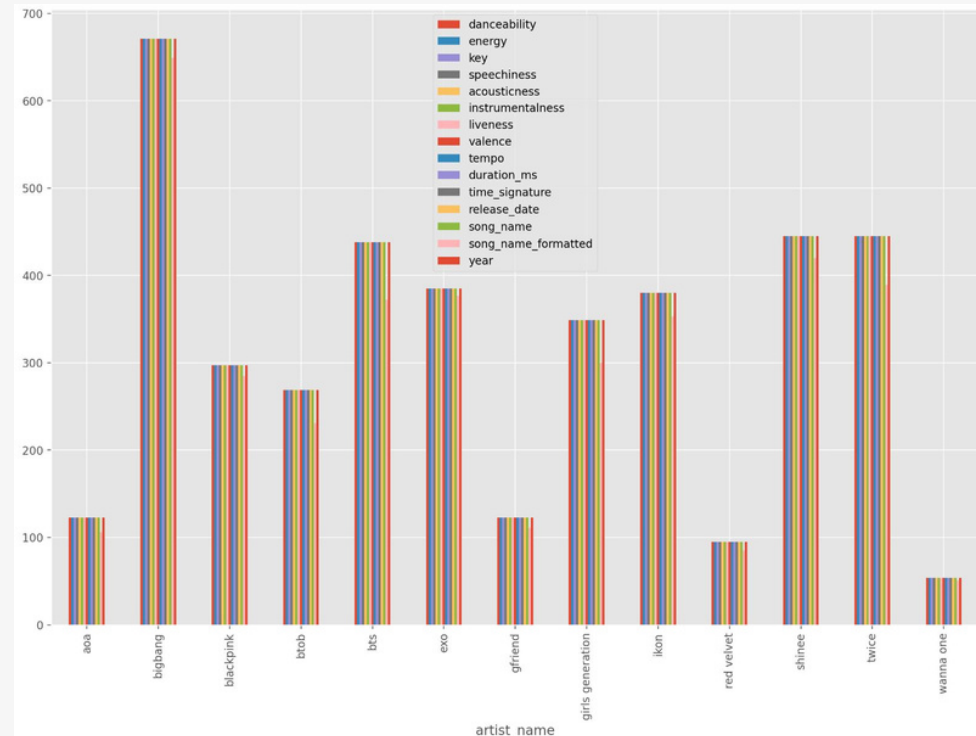


From Youtube Data API

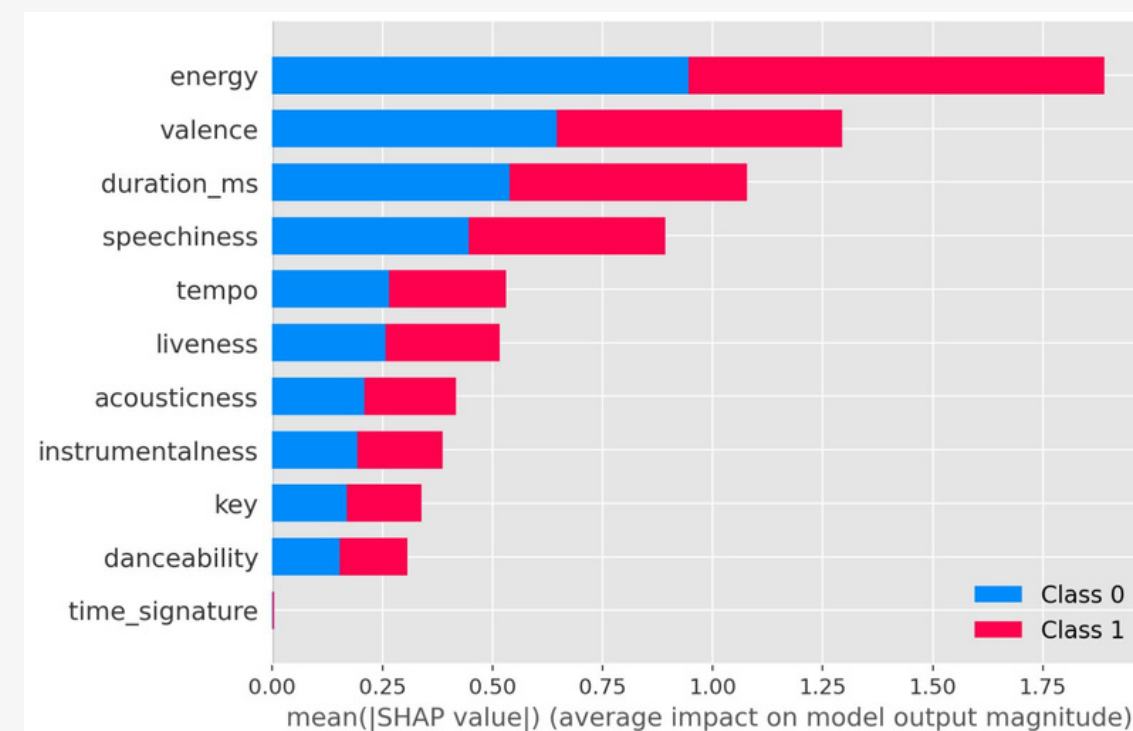




From Spotiylf Web API



	speechiness	instrumentalness	danceability	energy	acousticness
artist_name					
bts	0.172844	0.012400	0.601454	0.801566	0.118142
bigbang	0.108219	0.006586	0.582627	0.832900	0.109640
blackpink	0.095616	0.000055	0.675269	0.712017	0.136358
red velvet	0.094951	0.017682	0.668874	0.748158	0.224725
wanna one	0.094881	0.000000	0.616815	0.787222	0.199652
ikon	0.093867	0.028128	0.630211	0.796621	0.191380
exo	0.087405	0.028308	0.618177	0.779132	0.189418
shinee	0.083504	0.014346	0.637085	0.807092	0.143948
twice	0.079760	0.040576	0.720548	0.801283	0.154477
btob	0.075164	0.046887	0.625970	0.744164	0.269874
aoa	0.073649	0.098046	0.665081	0.847846	0.159874
girls generation	0.072917	0.052389	0.670790	0.797883	0.228858
gfriend	0.054407	0.289859	0.617545	0.719066	0.253075



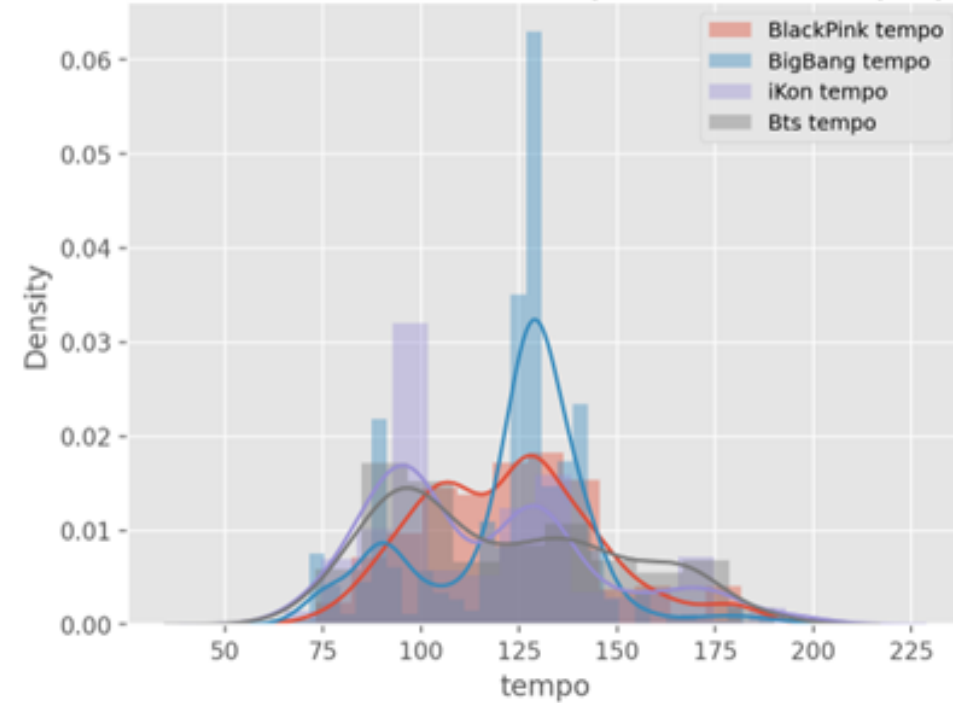
DataSets

	danceability	energy	key	speechiness	acousticness	instrumentalness
index						
830	0.794	0.719	0	0.0761	0.01190	0.000000
831	0.813	0.657	0	0.0372	0.00269	0.000000
832	0.918	0.585	7	0.0889	0.06270	0.000000
833	0.732	0.555	1	0.0340	0.00522	0.000005
834	0.647	0.723	5	0.0491	0.00503	0.000000
835	0.439	0.352	0	0.0570	0.58700	0.000000
836	0.693	0.606	7	0.0308	0.00817	0.000000
837	0.564	0.682	6	0.1130	0.01460	0.000000
838	0.688	0.741	4	0.1450	0.01700	0.000000
839	0.820	0.686	0	0.0380	0.00412	0.000000
	liveness	valence	tempo	duration_ms	time_signature	artist_name \
index						
830	0.2760	0.690	90.016	186964	4	blackpink
831	0.1830	0.651	110.053	175889	3	blackpink
832	0.6240	0.519	131.966	179173	4	blackpink
833	0.0586	0.650	124.011	178924	4	blackpink
834	0.1760	0.443	105.001	162570	4	blackpink

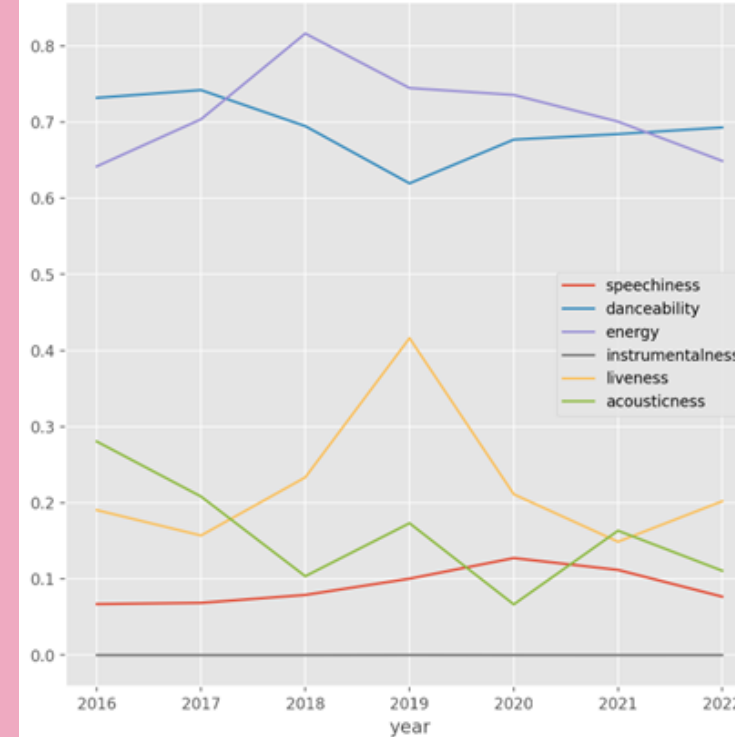
	danceability	energy	key	speechiness	acousticness	instrumentalness
index						
0	0.163	0.951	2	0.1960	0.04890	0.0228
1	0.613	0.959	2	0.1020	0.39200	0.0000
2	0.473	0.977	10	0.3500	0.13100	0.0000
3	0.637	0.937	10	0.1240	0.04280	0.0000
4	0.562	0.866	11	0.0685	0.07970	0.0000
5	0.608	0.769	11	0.0556	0.43600	0.0000
6	0.641	0.798	7	0.0947	0.31600	0.0000
7	0.574	0.914	5	0.1290	0.12800	0.0000
8	0.586	0.857	8	0.0827	0.50200	0.0000
9	0.481	0.891	6	0.1600	0.00923	0.0000
	liveness	valence	tempo	duration_ms	time_signature	target
index						
0	0.332	0.108	75.942	65573	4	0
1	0.354	0.282	116.012	225120	4	0
2	0.539	0.524	175.810	224560	4	0
3	0.756	0.330	117.989	240587	4	0
4	0.902	0.469	83.976	200560	4	0
5	0.879	0.371	84.014	244053	4	0

Experiments

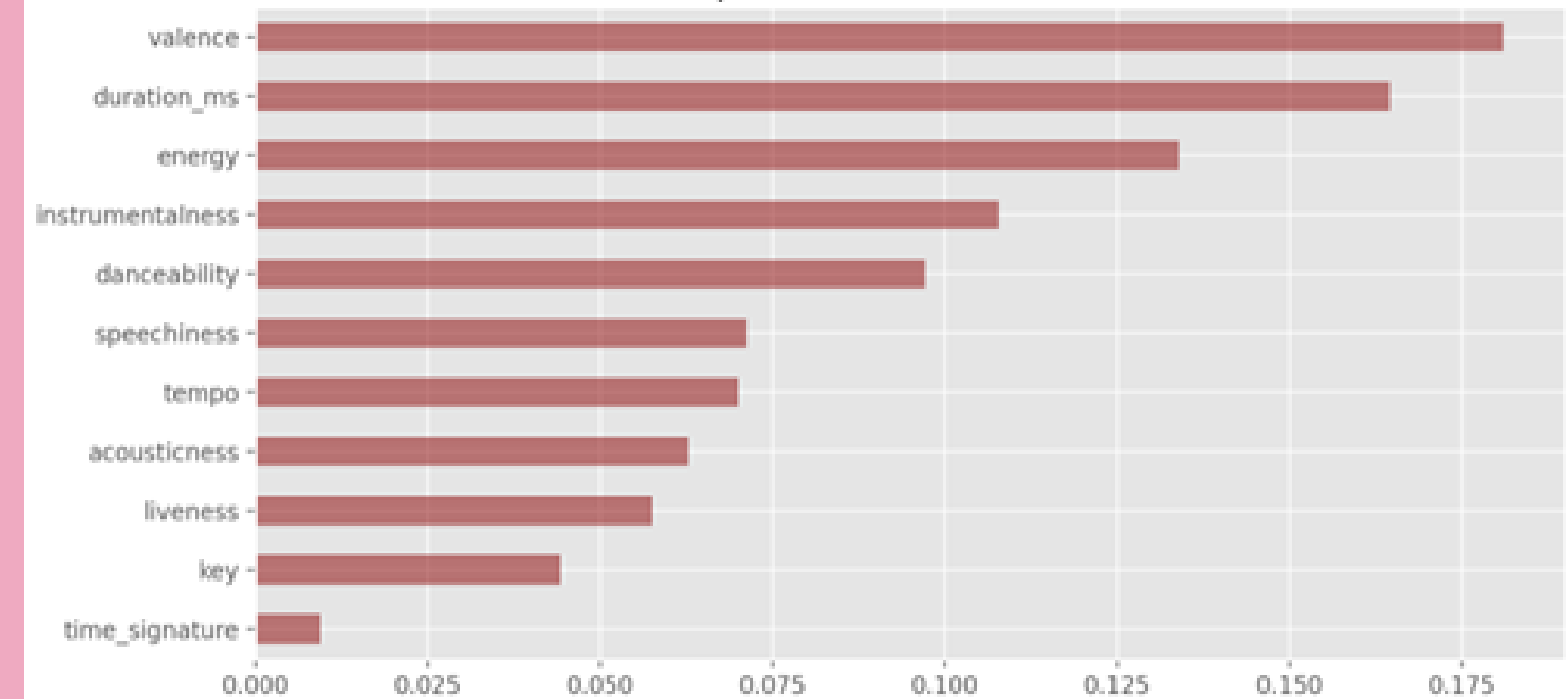
Distribution of musical tempo of four k-pop groups



Evolving trends in BlackPink's music by year (averaged)



Feature Importance RandomForest Classifier



References

- [1]Who is BLACKPINK? <https://rachelombok.com/blackpink>
- [2]Data Analysis of K-pop: Playing with Spotify API
<https://nancyanyu.github.io/posts/63adf3bb/>
- [3]What Is Clustering?
<https://builtin.com/data-science/data-clustering-python>
- [4]What is LDA?
<https://towardsdatascience.com/latent-dirichlet-allocation-lda-9d1cd064ffa2>
- [5]Extracting Song Data From the Spotify API Using Python
<https://towardsdatascience.com/extracting-song-data-from-the-spotify-api-using-python-b1e79388d50>
- [6]How to combine multiple CSV files using Python for your analysis <https://medium.com/@stella96joshua/how-to-combine-multiple-csv-files-using-python-for-your-analysis-a88017c6ff9e>
- [7]Youtube Data API Reference
<https://developers.google.com/youtube/v3/docs>



BLACKPINK



BLACK PINK

Thank You For Listening ^_^

Necdet Kaan Özdoğan
Berat Berkay Erken
Mehmet Ümit Açık
Zehra Yıldız Açıkgül