EARWORM Analyzing Similarity and Shared Fanbases Among **Universal Music Group** Artists

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UNIVERSAL MUSIC GROUP

Client & Problem

Universal Music Group (UMG) is the world's leading music company, capturing



of the digital music market industry.

To inform collaborations, we tackled:



Which signed UMG artists have the highest number of followers in **common?** What factors (e.g., genre) influence shared fanbases?



Data

1. UMG Artist Sample (C) Contains a sample of UMG artists and corresponding artist information

2. Custom Twitter Dataset in the Contains a subset of 167 artists with <100,000 Twitter followers & Twitter follower data (full list of follower IDs)

Data Limitations











Defining Artist Similarity

len(intersection(artist1_followers, artist2_followers)) / min(len(artist1_followers), len(artist2_followers)



Artist Similarity Data

PIVOT ARTIST IDS SIMILARITY MATRIX THE MAJORITY OF ARTISTS SHARE <1% OF FOLLOWERS artist name common entity entity_id à Ivaro Soler à Ivaro Soler à Ivaro Soler à Ivaro Soler à Ivaro Soler





JOIN WITH ARTIST SAMPLE

_id	common_artist_name	value	genre	common_genre
	André Rieu & His Johann Strauss Orchestra	0.17	Рор	Classic
	Andreas Ottensamer	0.57	Рор	Classic
	Anoushka Shankar	0.10	Рор	Other
	Arlissa	0.60	Рор	Рор
	Ars Magna	0.01	Рор	Рор

Artist Connectivity



Similarity Between Genres



Genre	Top 1	Top 2
Classic	Classic	Other
Dance	Dance	Rock
HipHop	HipHop	Dance
Jazz	Jazz	Other
Latin	Latin	Other
Other	Jazz	Classi
Рор	Dance	Rock
Rock	Rock	Dance

Top 3

Jazz Rock Pop







DASHBOARD



UN	IVERSAL		Art	ists		C	Parameter Artist	BANNERSMUSIC
UNIVERS	AL MUSIC G	ROUP	10	57			НірНор	Genre
	View artists	Top 5 Simila	ar Artists	fan following!		Same Gen	ire F	
BANNERS Rock	Bishop Briggs X Ambassadors	shop Briggs				View ger	Top Sin nres that have the top share	tilar Genres d fan bases/following! Filter Genre a
	Zella Day Keir Lido					Classic	HipHop, 0.1 , 28	
						Dance		НірНор, 0.
Similar /	Artists Tree	еМар						
Bishop Briggs	Keir	Gryffin	The	The		Jazz		НірНор, 0.3 , 28
	Lido							
X Ambassadors	Phantogram	Middle Kids				Latin	НірНор, 0.0, 28	

Dashboard Value





•							
	6		Parameter	BANNERS	MUSIC		•
	E.		Artist	BANNERS	Genre		•
			НірНор	НірНор			
	Same Genre	F					•
	View genre	es that have t	Top Sim	i lar Genre I fan bases/	es following! Fil	ter Genre abo	ve.
	Classic	Н	ірНор, 0.1 , 28				
	Dance					НірНор, 0.5, 2	28
	Jazz			НірНор, 0.3 <i>,</i>	28		
	Latin	НірНор,	0.0, 28				

OUR DASHBOARD

Conclusions

We identified follower overlap between 167 signed UMG artists to inform potential collaborations.

Through our dashboard, UMG can identify artists that share overlap and the extent of their overlap. We also showed how genre plays a role in shared fanbases.







Future Work



Expand UMG artist sample & incorporate unsigned artists. We could strengthen our analysis with larger (>100,000 followers) and non-UMG artists.



Identify additional similarity factors. We would look into additional factors like artist audio features on Spotify (e.g., danceability, energy, and instrumentalness).



Create a predictive model. We would create a model to predict the likelihood that two given artists would share fanbases (to inform collaboration).



