

"The Quest"

Deep Learning Based Song Recommendation System

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The Quest is a deep learning-based music recommendation system. Suggestions were made with Deep Learning models instead of "Collaborative Filtering" which is one of the traditional methods. Models were developed using the Million Song data set for the project. It provides the user with suggestions about the number of times the user has listened to the music he has listened to before, or the music that is likely to listen among the music he has never heard before, and how many times he can listen.

Basically, our deep learning-based song recommendation system tries to understand the songs that the user likes, based on the songs that the user listens. In this way, it recommends the songs that the user does not listen to before but maybe can listen to many times in the future.

Below we will suggest new songs for user number 47157. We will also try to guess how many times user 47157 can listen to these songs. The main picture is the songs that 47157 users have listened to before. The parts below are the IDs of the songs that our model predicts and the estimation of how many times these songs will be listened to by that user.

user	song	listen_count	title	year
47157	7887	1.0	Wendy Clear	1998
47157	3036	2.0	No Puedo Evitar (Pensar En Ti)	1986
47157	4081	1.0	What's The Difference	1999
47157	543	4.0	Tighten Up	2010
47157	252	7.0	Ain't No Rest For The Wicked (Original Version)	2008
47157	3259	1.0	Taylor	2003
47157	945	23.0	All The Right Moves	2009
47157	3721	1.0	From Where You Are	2010
47157	7091	1.0	Space Cowboy	2005
47157	956	1.0	Paradise City	1987
47157	971	15.0	You'd Be So Nice To Come Home To	1960
47157	5931	3.0	Servant in heaven - King in hell	2001

Song_ID	array([5776, 264, 4214, 5423, 945, 7208, 1468, 971, 3708])
Listen Count Preds:	[21, 19, 19, 19, 18, 18, 18, 17, 17]
Song Names:	'Big Boss Man', 'Blood Red', 'All Over Me', 'Boots On'

In this picture, the songs in the data set are close to each other according to their bias values.

