

MUSIC RECOMMENDATION SYSTEM

CENG HISTORY X & ARGEDOR

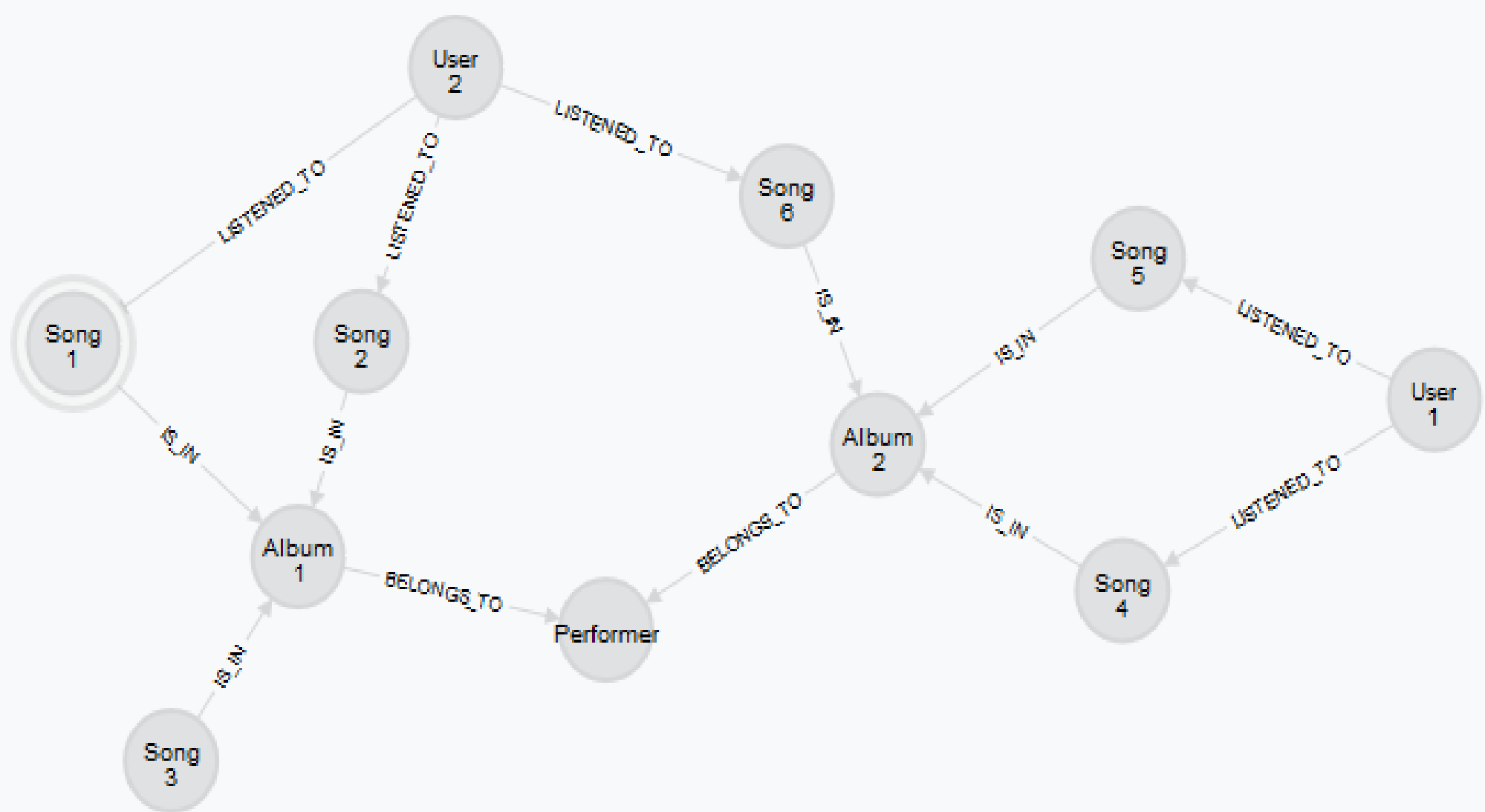


ABSTRACT

Recommender systems are engines that make recommendations for users on the basis of data the users have entered into the system. The more data a user has provided, the more accurate such systems can be. ‘Music Recommendation System’ is a software product that make offline recommendations using collaborative filtering algorithm.

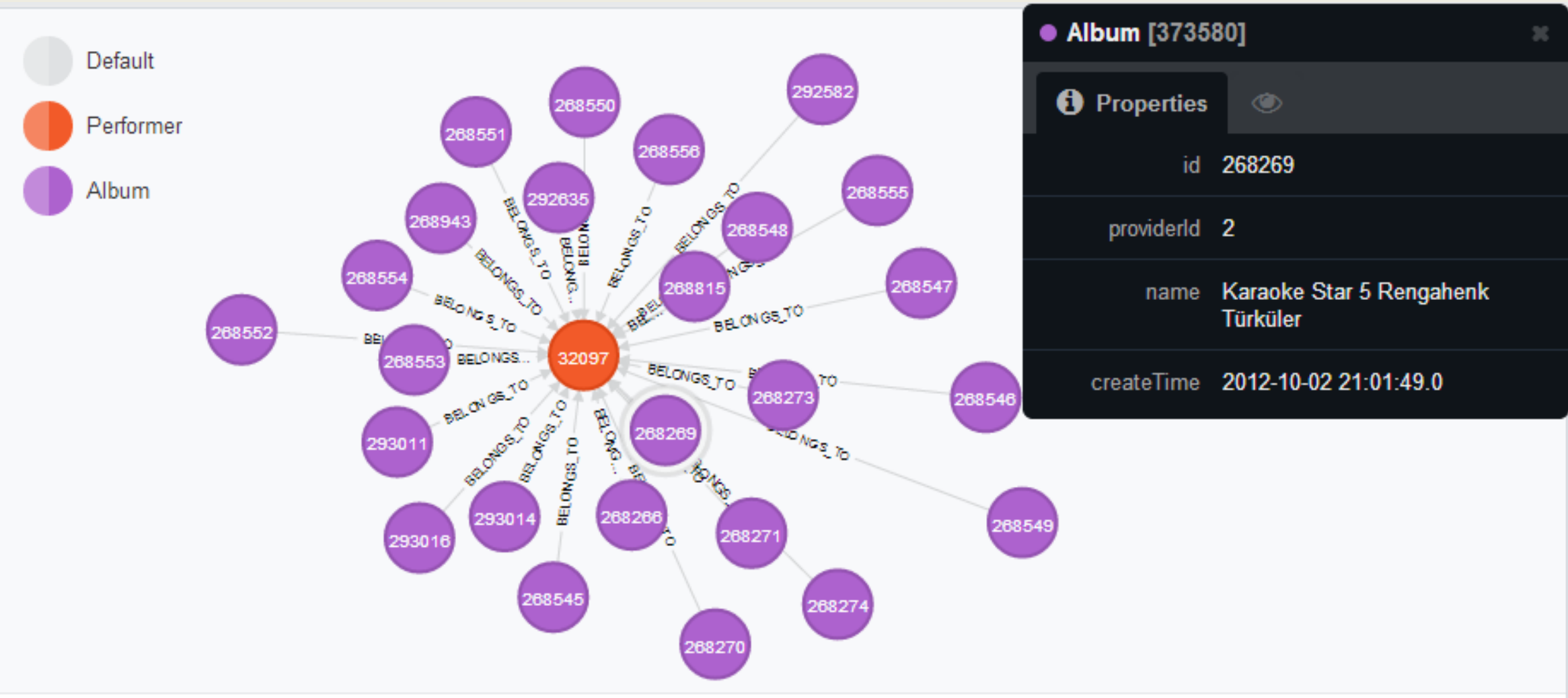
INTRODUCTION

Music Recommender System provides new songs to users in order to make it easy to choose music they may like. The system processes user’s listening history. After a fast processing, the most accurate recommendations are produced and represented to users. Additionally the system represent the songs on a web service.



II - Producing a prediction for the active user. In the neighborhood-based collaborative filtering algorithm, weighted aggregate of the subset of nearest neighbors of the active user is used to produce a prediction.

III- Generating top-N recommendations is step is to recommend N top-ranked items. There are user-based and item-based top-N recommendation algorithms.



RESULTS

The average value of our precision calculation is provided in the below table.

	Precision results
Colaborative Filtering	0.0022

ACKNOWLEDGEMENT

- We would like to thank our advisors Dilek Onal, Prof. Dr. Ismail Hakki Toroslu and Prof. Dr. Veysi Isler for their contributions and special thanks to ARGEDOR team for their continuous support during the project.

EVALUATOR

We have used the **Precision Metric** to evaluate our recommendation algorithm.

Precision metric, evaluates the proportion of the intersecting song number between the recommendation list & user history in the test data, to the whole recommended songs. In other words it is the proportion of **successful recommendations** to the whole recommended songs.

$$\text{Precision} = \frac{\# \text{true-positive}}{\# \text{true-positive} + \# \text{false-positive}}$$

CONCLUSION

- Though the data density is high, our system creates accurate recommendations in a reasonable amount of time.
- The increase in the amount of data contributes positively to our recommendation algorithm's accuracy as well as this doesn’t affect the speed of creating a result.

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Ceng History X

User ID: Get Recommendation Get User History

Performers	Songs
Mabel Matiz	Kerem Gibi
Gülşen	Irgalamaz Beni
Stromae	Papaoutai
Naughty Boy	La La La
Mabel Matiz	Ya?m Çocuk
Bora Öztoprak	Çetrefilli Yollar
Selçuk Balç?	Da?lar?n Kar? Yetmez
Robin Thicke	Blurred Lines
Selena Gomez	Slow Down
Avicii	Wake Me Up (Radio Edit)
Alexandra Stan	Get Back (Asap)
Inna	Amazing
Gusttavo Lima	Balada (Sagi Abitbul Official Remix)

Performers	Songs
Mabel Matiz	Kül Hece
Cariprit	Fiesta
Enrique Iglesias	Turn The Night Up
Lana Del Rey	Summertime Sadness [Lana Del Rey vs. Cedric Gervais] (Cedric Gervais Remix / Radio Edit)
Mabel Matiz	A?k Yok Olmakt?
50 Cent	Just A Lil Bit (Album Version (Explicit))
Griplin	A?k Nereden Nereye
Mabel Matiz	Söylese O Ben Söyleyemem
Mabel Matiz	Zor De?il
Mabel Matiz	Zaman